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THE BULLETIN
OF THE
NORTH CAROLINA DENTAL SOCIETY
CONTAINING THE
PROCEEDINGS
OF THE
FIFTY-SEVENTH ANNUAL MEETING
MAY, 4, 5, 6, 1931
ROBERT E. LEE HOTEL,
WINSTON-SALEM, NORTH CAROLINA

VOL. XV

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The stenographer's notes of the 1931 proceedings were thoroughly read and studied. All matter that was not pertinent to a clear and accurate record was eliminated for the sake of economy. Paul Jones' administration came into office with a balance of less than \$50.00. His administration not only lived within its income for the fiscal year, but turned over to the new administration a good substantial balance after all bills were paid. (See auditor's report of the Secretary-Treasurer.) The only items not paid are the printing and distribution of the proceedings. We do not expect this cost to exceed \$700.00, leaving a balance, roughly speaking of around \$300.00 or \$400.00.

We hope that our efforts to give you an efficient and economical administration will meet with your approval. Mistakes—we have made, of course, but we beg of you the same tolerance that you would appreciate were you likewise placed.

EDITOR-PUBLISHER.

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PROCEEDINGS
OF THE
NORTH CAROLINA DENTAL SOCIETY
FIFTY-SEVENTH ANNUAL MEETING

HOTEL ROBERT E. LEE, WINSTON-SALEM,
NORTH CAROLINA, MAY 4, 5, 6, 1931

FIRST DAY—MONDAY, MAY 4, 1931

MORNING SESSION

The Convention was called to order at 10:00 o'clock a.m., by Honorable Paul E. Jones, of Farmville, President.

President Jones:

The Fifty-Seventh Annual Meeting of the North Carolina State Dental Society will now come to order.

We are pleased to have with us this morning, Reverend R. E. Gribbin, Rector of St. Paul's Episcopal Church, Winston-Salem, who will pronounce the invocation. Will you please stand?

Rev. R. E. Gribbin:

Almighty God, the giver of every good and perfect gift, we thank Thee for all the blessings we have received as a people and as individuals, for the advancement of science and of human understanding, and for that which pertains to the betterment of the mind the spirit and the body. Especially do we pray that much good may be accomplished by the dental profession, and we pray Thy guidance upon their meeting here that they may both receive and know what things they ought to do, for their own welfare, their patients, and humanity in general; and that they may have grace and power faithfully to put these things into practice.

This we pray in the words of Him, who said: Our Father, who art in heaven, Hallowed by thy Name. Thy kingdom come. Thy will be done on earth, As it is in heaven. Give us this day our daily bread. And forgive us our trespasses, As

we forgive those who trespass against us. And lead us not into temptation; But deliver us from evil: For thine is the kingdom, and the power, and the glory, for ever and ever. Amen.

President Jones:

It is now with pleasure that I introduce to you, Mayor George W. Coan, Jr., of Winston-Salem, who will now welcome you in behalf of the City. (Applause.)

Mayor George W. Coan, Jr.:

Mr. Chairman and members of the State Dental Society (at this point a band is passing, loudly playing), it is a rare experience to deliver an address of welcome to you and at the same time be accompanied by such wonderful music! (Laughter.)

It is also an unusual opportunity I have to be in a position where I can talk back some to you dentists, because most of the time they do all of the talking, and have your mouth in such shape you can't say a thing to them. Nevertheless, it is a rare opportunity to bring you greetings and to extend a very cordial welcome from the City at large.

It is a particular pleasure on this occasion, too, because there is some personal satisfaction when I notice that this Convention is honoring one of our citizens, one of your charter members, Dr. Robert H. Jones, a man whom I have known for a great number of years, for as long as I remember anything I remember Dr. Jones. And I like to think of this Convention honoring Dr. Jones, because in doing so you are honoring a man who merits the honor (much applause). If you and I and all of us were to emulate his example in living a life of temperance—temperance in living, temperance in working, temperance in recreation; we too, no doubt, would be able at the age of three score and ten to be performing satisfactorily the duties of our profession and business, as he is qualified to do from day to day.

As you know, Winston-Salem, is known as a manufacturing City. When we think of a manufacturing City, we think of men and we think of materials, because everything is made by the use of men and materials. I could talk on this subject for some little time. You all have heard about our large tobacco interests here, and the largest tobacco center of the world, and our other industries, but I do not intend to spend these few minutes in talking of men and materials.

We are proud of ourselves and of our City and if we are proud of any one asset it is the character of our people. A few weeks ago I received a letter from the President of one of the mid-western universities, asking why such friendly feeling existed here in this section between the races, with such a large population of Negroes, why did we not have more outbreaks, and what explanation would I advance for the friendly interracial feeling between the various peoples living here.

Not feeling qualified to answer that question as well as some one I knew, I called on one of our Negro educators, Dr. S. G. Adkins, who by the way is another Booker T. Washington living in North Carolina. He is a Negro man, humble in character, who has lived in this City over forty years, and he himself has done more than any one man, white or black, to maintain this friendly relationship between our white people and Negro people. He wrote in answer to this question, a very simple, short, letter, which I thought not only explained the good feeling which exists here between the races but also in a large measure explained the type of citizenship we have today. He said: "Almost two hundred years ago this section of Piedmont was settled by the Moravian sect in old Salem, a religious body who came over here in search of religious liberty. This sect from the outset almost two hundred years ago preached good will and fair dealings among men." That gospel which they preached almost two hundred years ago has spread from time to time, and that gospel explains that we have no Negro problem in Winston-Salem, but simply a human problem, as should be the case.

In talking about our citizenship, the type of our men and women, it is only fair to say that the most liberal class of people to be found any where live in this section. I doubt if we could find many cases where the charities and philanthropies, providing funds to care for the underprivileged, are handled as successfully and as easily as they are handled here; all because our people who have money are very liberal in their giving. It might interest you to know that we adopted the community chest plan of caring for our charities and character building institutions eight or nine years ago. The first year the community chest program included the raising of about thirty thousand dollars, last year, the eighth or ninth year, the goal was \$130,000.00, providing funds for eleven or twelve charity and character building organizations. In every case,

without exception, in each of these annual drives, from eight years ago until today, the funds have been raised within a week's time, and in a majority of cases within twenty-four hours time the funds were raised for all these charities, gifts ranging from a dollar to six, eight, and ten thousand dollars are made, and in this one drive all of our charitable organizations are taken care of in the way of finances.

And significant of this type of citizenship, again, I think we all must realize that the home owner is the man who makes the real stable, dependable citizen. About twelve years ago in Winston-Salem, only about a third of our citizens owned their own homes; today the increase in home ownership has been so steadily and yet so rapidly accomplished that over half of our citizens, including the black people, own their own homes. During the last twelve years over twelve thousand homes have been built at a cost of something like ten million dollars. We also take, as you have perhaps already noted, unusual pride in church ownership. During the last ten years, some dozen or more new church buildings have been built at a cost of between four and five million dollars, which represents an investment in church buildings and equipment of ten times what existed here fifteen years ago.

With our schools the experience has been the same, as has been the case of most cities in North Carolina.

And now, in closing, I want to again tell you that you are very cordially welcome to our City, we wish you a most happy meeting together, and also suggest that you write your two partners on the radio, Amos and Andy, your thanks for what they have meant to the dental profession, and make a suggestion that in addition to saying each day "Use Pepsodent twice a day and see your dentist twice a year" that they say "Use Pepsodent twice each year and see your dentist as often as possible." I thank you very much. (Much applause.)

President Jones:

I am sure that we all appreciate these words of welcome from Mayor Coan; and I am now going to ask Dr. Wilbert C. Jackson to respond to this address of welcome. (Applause.)

Dr. Wilbert C. Jackson, Clinton, N. C.:

Mr. President, Mayor Coan, Members of the North Carolina Dental Society, my Friends: For fifteen years I have attended the annual meetings of the North Carolina Dental Society.

Fourteen times in as many years, I have heard Dr. McClung and others, some of whom have gone to their reward, invite this Society to hold its next annual meeting in Winston-Salem. Thirteen times this Society has said "No, I choose to go elsewhere."

Then the third, fourth, fifth and sixth invitations were refused, I knew full well there wouldn't be another invitation extended to come to Winston-Salem. Because they had told us of this wonderful city, whose hospitality cannot be excelled. But the very next year, the seventh invitation was extended, only to be refused. Then the eighth, ninth, tenth, eleventh, twelfth and thirteenth! Certainly no one expected the fourteenth invitation from this City. But these people in Winston-Salem, they are different, they wouldn't take "No" for an answer.

So, last year, in the City of Asheville, when the invitations were not coming in so thick and fast for the 1931 meeting, Dr. Harry Keel, spokesman for this great City, for the fourteenth time it had happened, rose to the occasion and extended the invitation to this Society to hold its 1931 meeting in Winston-Salem. Much to their surprise the invitation was accepted, and we are happy to be here this morning, in your wonderful City.

Upon investigation I found that this wonderful spirit of hospitality was brought to Wachovia by twelve single brethren who were Wachovia's first settlers in 1753; for we are told that when they had found shelter in a deserted cabin, their first thoughts were of the strangers that might come in their midst. So the first building to be built was a building to house the strangers, where a genuine welcome awaited every stranger that came within the length of their land. So it's no wonder that these dentists in Winston-Salem, some of the successors to these twelve single brethren who came to Wachovia 178 years ago—I say, it is no wonder that these men didn't take no to their invitation to this Society even though it was fourteen times before their invitation was accepted.

We are happy to be here in your wonderful historical City this morning; not only historical, but known the world over for its industries, many of which are second to none. We hope that we shall find time to visit, see all of your factories. We have already been enjoying the beautiful scenery that greets your eye as you drive through your streets and your magnificent

homes. Many of us have looked forward to seeing your schools, because we have been told that they can be considered the best. We deem it quite a rare privilege to meet in this City, Winston-Salem, where its churches and colleges have made it known to the ends of the earth, not only as a historical and industrial center, but a center where peace and brotherly love permeate your very being. We will not look upon your beautiful City and your historic spots with a feeling of envy, or jealousy, but rather with a feeling that they are almost but sacred, and thank God that it is our privilege to meet where so much history has been made, and to associate with men who have had such a part in preserving these sacred spots.

Mayor Coan, I am thinking, too, today of that splendid bunch of men who met fifty-seven years ago in Beaufort to organize the North Carolina Dental Society. It was these men who made it possible for you and me to gather today as a profession in North Carolina. It was these men who gave to us a heritage of which we may be proud. Mayor Coan, we are happy today to meet in a City that has the honor of claiming the one surviving of our charter members, Dr. Robert H. Jones, as one of its illustrious citizens. (Much applause.)

I thank you. (Much applause.)

President Jones:

We thank you Dr. Jackson. I will now ask Dr. Wheeler to assume the chair.

Dr. John Wheeler, Winston-Salem:

We now will have the pleasure of hearing the annual address of our President, by Dr. Paul E. Jones. (Applause.)

*Mr. President, Fellow Members of the North Carolina Dental Society,
Ladies and Guests:*

I desire to express to the entire Membership of the North Carolina Dental Society my humble appreciation for the confidence shown by electing me to this honorable office. Perhaps I have not been able to measure up to the high standards set by my predecessors in office; yet, I yield to no one in my zeal to make this Society, one of the best to be found anywhere. As President-elect last year, and again this year as your President, I have had the pleasure of attending a District Meeting in every District of our State, and I wish to assure you that it has been a joy and inspiration to meet and greet you. The satisfaction of being the President of a united, harmonious Society, with officers, committees, and other members all standing ready to do their part to make the past year a pleasant and pro-

gressive one, the best in our History, has given me many of the happiest hours of my life.

In looking back over these years I am constantly reminded of the opportunities offered me, by virtue of this office, to be of some real benefit to the profession in our State. As I find my term ending, there is still a great deal unaccomplished; however, with confidence in the future, I feel that the responsibility of this office will fall on worthy and more capable shoulders, and to my successor at this time, I wish to pledge my whole-hearted support. No one will more cheerfully render our new President and the North Carolina Dental Society, such aid as lies within his power than I.

As we come to the Fifty-Seventh Annual Meeting of our Society looking into the boundless future, we can mark the present and note the past, but can anyone with good sound reason, after measuring the progress of our profession during the past thirty years, draw a mental picture of its achievements through the ages that are to come? Now while we pause for a few moments, let us turn our thoughts to some of our noble men and records of the past, to some of the occurrences and needs of the present, and leave time and necessity to shape the history of the future for us. After all, the future remains but a prediction, and our success and failures are only measurable by the events and experiences of the past.

The North Carolina Dental Society was founded August 7, 1875, at Beaufort, N. C. The records are not very clear as to what sentiments prompted the calling of this meeting, but they show that twelve men were present. Two were elected to membership at this meeting, making a total of fourteen men. It is to these men that we owe our debt of gratitude for founding this society, that was destined to be the great guiding factor in the profession of our State. Today we still have with us one of this noble group; it is fitting that we pause and rise to honor that venerable Gentleman of Dentistry, Dr. R. H. Jones of Winston-Salem. (Much applause, all rising.) I am sure the history of our profession will show that not all men were equally generous, but rather the minority was endowed with the true vision of what Dentistry was to mean to our State. I feel that I would be open to censure by the members of this Society, were I not mindful at this time of the many benefits that we are enabled to enjoy through the pioneer work done by that group of men, of which group only one remains to sit in silent review while we bask in the full sunlight of their achievements. Many of us may look with pride and pleasure to the knowledge gained and the personal friendship enjoyed with those early founders of our association. I do not intend going into a recital of the past events of our Society, nor giving in detail an account of the activities or lives of those who were prominent in its affairs, however interesting it might be.

Although Dentistry as a profession had a very humble beginning, since it was just being born of necessity, it was bound to flourish. It is a peculiar combination of science and art, and comprises such a wide range of thought that it, at once, becomes a mecca for one who wishes to specialize. No general practitioner of medicine can honorably boast of a calling more vital or necessary to the

welfare of mankind; no sculptor of an art more rare and intricate than that which lies within the field of the dental practitioner. The past fifty-seven years have brought to us much, for we can certainly record the development of our profession in North Carolina from the date that we organized. To the men who have heard and answered the call; to the men who have seen the vision, and gone out as pioneers to develop their ideas, we are indebted. The men who found the art in dentistry grew more and more steadfast; the men who saw and recognized the ravages of dental disease knew that fundamental knowledge alone could accomplish the desired result. Many years ago we realized that no dentist could be fully equipped without all obtainable knowledge of the healing art. This realization has placed dentistry in the position to receive its proper recognition, whereby it can give to those whom we serve its proper confidence and esteem. We have long ago realized that our profession must deal, not only with the restoration and repair of dental organs, but also with the causes of lesions of the teeth and adjacent tissues. Today we are dealing with the problem of life and death. I am confident that the dental profession is beginning to command more and more the proper rank it should hold in our State. We are indebted to those who through adverse circumstances have brought this about. Despite our increased knowledge and application, dental disease as a contributor to general ills, is on the increase; and we must seek earnestly to make this a day of prevention, rather than cure.

OBLIGATIONS AS MEMBERS TO THE ORGANIZATION

I should like to remind you of a few of your obligations as members of this Society, and to it as individuals. I hope no one will construe what I say as unkind criticism or reflection on the efforts of any individual. I am willing to admit that I have been guilty of all the delinquencies of which I wish to remind you. Are you doing all you can to make this Society a success, or, are you shirking your responsibility and letting the other members work out the problems? You men were endowed with talents and ability; and unless you are exercising them for the advancement and broadening of your profession, you are not living up to your full responsibility. Your success will be short lived, for we succeed in our efforts only in terms of a sense of moral responsibility and faithfulness to a charge. It is not enough that you merely attend this State Meeting and listen only to the part of the program you like. You should contribute interest and enthusiasm to the meeting by entering into the discussion of the papers, clinics, resolutions, and motions affecting this Society. By all means be an active member. You might achieve a certain degree of success in dentistry without belonging to a Dental Society; however, practically all dentists who have obtained any eminence in the profession are highly active in Society affairs—from the smallest local on up to the American. An organization such as our State Society cannot remain stable; it must grow, and make new adjustments of its life to ever changing social and economic dental environment. If it fails in accomplishing this factor of adjustments, which the life of it demands; if it fails in meeting

the changing conditions, it will find itself unable to live a successful and useful life in its sphere of action, which must always have in it a certain element of sane freshness and progress. With these thoughts naturally arises the question, what is the function of such an organization? The function of such an organization as our State Society needs no analysis, for it has served well its purpose in the past. Surely the most dominant function is to encourage the spirit which has occupied the minds and held true the hearts of courageous dental men all these years. This spirit has been primarily one of self forgetfulness and thoughtfulness for others. It is the imperative duty of this Society to have meetings and present essays and clinics that will promote free discussion, and bring the men together where they can clasp hands and rub elbows, so that they may better appreciate the fineness of fellowship and forget for all time the superficial smallness common to the human race. When every unit of our organization begins to function normally and at its best, we as members will soon surpass our greatest power of imagination in giving relief, health, and happiness to the world.

RESEARCH

In a recent report of Dr. Homer C. Brown, Secretary of the Research Commission of the A. D. A., it is disclosed that the American Dental Association has expended in excess of \$300,000.00 in its activities since 1913. This has been distributed through many agencies all over the country; in almost every instance the grant has been matched or excelled by the individual, agency, or institution receiving it. So it is fair to assume that possibly more than \$1,000,000.00 has been expended during this time on dental research, under the direction of the Research Commission of the A. D. A., this commission has successfully formed a connection with the National Bureau of Standards in order to carry forward a coöperative program of research, relative to some of the most important materials used in the practice of dentistry, in order to give the profession the benefit of these results in the shortest possible time. The work at the Bureau of Standards is conducted on a coöperative basis with the Federal Government; the A. D. A. has two research associates at the National Bureau of Standards. Dr. Wilmer Sonder, who is to appear on our program Wednesday morning has made an enviable reputation in this position as chief of the Dental Laboratory. I feel justified in saying that the various organizational activities of this Research Commission have been quite important factors in the accomplishments of the dental profession.

LEGISLATIVE ACTIVITIES, CLOSELY RELATED TO OUR ADVANCEMENT

This means more to dentistry than has been generally recognized. Every dental practitioner is deeply indebted to our Legislative accomplishments for many, I might say most, of the advantages enjoyed in practice today. Our early founders of this Society soon realized that without statutory protection, the Examining Board that had been appointed in 1876 under the head of a committee, could not function and was void and useless, until such a time as it could

operate under Legislative authority. In 1879 four years later, this was accomplished, which elevated our body, organized and associated for certain dental developments to the dignity of a profession. Previously there was nothing more than merely an agreement of parties, with no guarantee of their rights by the State; consequently, we are impressed with the fact that their beliefs were continually pressing from the legendary into the scientific stage and that along with the growth of the dental profession, preserved by its Legislative standards which have increased from time to time. The people, whose ideas were mostly primitive, began to develop and that while organization preceded legislation, we could not retain the dignity of a profession without this legislation. I should like to call your attention to what I deem three outstanding achievements through Legislation:

First: The enactment by Congress in October, 1917, the law giving dentists the same rank enjoyed by physicians in the United States Army and Navy.

Second: We have retained through the efforts of our Legislative Committee our representative on the State Board of Health.

Third: Our recent law enacted by the 1931 North Carolina Legislature providing for the election of a dentist on every County Board of Health. This last law I deem of the utmost importance to us as members of the North Carolina Dental Society, and it is only natural to assume that we should see that only our best men who are active and in good standing in this Society should be selected to serve on these county boards. There are lots of members of this Society who have no clarity of the purpose and importance of the Legislative Committee, that through its action alone are we a profession, not an association. The association will take care of itself, but our keenest intellects must ever be on the Legislative end to take care of the Society.

ADMINISTRATION AND RECOMMENDATIONS

There is much I might say of the growth of our Society and the steady progress it has made during this fifty-seven years; however, the knowledge you already have of the progress of your Society bears testimony in itself to the work that it has accomplished. It is a monument to those who have been its sponsors; so let us be ever mindful of the inheritance left us by those who have blazed the rugged trail, and not falter in our duty for the betterment of mankind. There are many matters of great importance that have been presented during the past year, and I wish to leave some of them with you at this time. If you will look back over your personal careers you will discover an interesting phenomenon. You will find that each stride of real progress has dated from a difficulty. You were confronted with a problem in business, in the solving of which you developed a new idea that has paid generous dividends and with amazing regularity, what seemed to be misfortune has turned out to be good fortune. First, I wish it definitely understood that anything I discuss or recommend in this address is not with any thought of criticism of any former officer or committee of any past administration, but with the thought of taking what we have had and adding a little here and there in the interest of progress and adaptation of

our Society to present day needs. I find that the affairs of the North Carolina Dental Society have been conducted well and in an honorable manner; and after investigation wish to brand as incorrect and without foundation, certain rumors that have been circulated to the contrary. Your officers and Executive Committee decided soon after our last Annual Meeting that it would be economically unwise to attempt to publish more than two bulletins this year, and that we should make a survey of our probable income and limit our expenditures safely thereby. The BULLETIN has been placed on a self supporting annual basis, the credit for which is due our Editor and Publisher, a new office created last year. It appears that if it is wise for the Executive Committee to have the general superintendence of the affairs of this Society, as provided in the By-Laws, it would also be wise to provide in the By-Laws that at least a majority of this Committee should have previous experience thereon, and the President should have the privilege of appointing one man and naming the Chairman for his term of office, rather than naming a new Committee in full each year. The advantage of this to the Society is obvious. The Secretary and Treasurer has had to make his reports to the Society at the last session of each Annual Meeting after the most of our dues, and other funds are collected and with practically all of our bills outstanding, which made it appear at times that we were in much better financial condition than our audits reveal. There is no way to correct this except by having the Secretary-Treasurer to file a later and final report to the Executive Committee for publication in the proceedings. Then every member of our Society would have it. We should effect an economy by making an adjustment of the salaries the Secretary-Treasurer and Editor Publisher's offices. I believe this can be done in fairness and with the approval of those who now hold these offices.

We have been operating under our present Constitution and By-Laws since April 16th, 1928. Since that time there has been some major and some minor changes by the House of Delegates, and there is a need to have these changes incorporated in their proper places in the Constitution and By-Laws and placed in the hands of our members. With full consideration of the foregoing, I wish to make the following recommendations:

First: That the incoming President appoint the Executive Committee as follows: One member for three years, one member for two years, and one member for one year; and that, beginning with our 1932 Annual Meeting, the incoming President shall appoint one member to the Executive Committee for three years and name the Chairman.

Second: That we amend the By-Laws to provide a salary of two hundred dollars annually for the Secretary and Treasury office, and that the Chairman of the Executive Committee be designated as custodian of the bond required of the Secretary.

Third: That we amend the By-Laws to provide a salary of two hundred dollars annually for the Editor and Publisher.

Fourth: That we amend the By-Laws to provide that the outgoing Secretary-Treasurer make in addition to report now required a final report to the Executive Committee within thirty days after

the Annual Meeting. This is to be published in the proceedings. That the books, vouchers, checks, stubs, and all papers, that have to do with the finances of the Society be delivered to the out-going Executive Committee, who shall have them audited by a licensed C. P. A., at the expense of the Society and deliver to the incoming Executive Committee within two months of adjournment of the Annual Meeting.

Fifth: That the incoming President appoint a special committee to incorporate in the proper sections and articles all amendments and alterations to our Constitution and By-Laws since its adoption on April 16th, 1928, and that this be printed and mailed to all members in good standing with the next issue of the bulletin.

In conclusion, let me say sincerely and humbly that this has been a wonderful, and elevating year for your President. I have no misgivings about the coming year being a notable one for the North Carolina Dental Society, for I know full well that President Keel is a man of whom we may well feel proud. This seems to be the opportune time for me to express my sincere appreciation to all the other officers and committees for their cordial and loyal support throughout the past year, with emphasis placed on the work done by the Executive and Legislative Committees. Whatever success and progress our Society has made during the past year has not been due to my efforts, or to the effort of any one or group of you, but the coöperative spirit of each individual. I shall always cherish the privilege of having had the honor of presiding over such a body of men, for,

There is a Destiny which makes us brothers,
None takes his way alone,
All that we send into the lives of others
Comes back into our own.

(Much applause.)

Dr. J. H. Wheeler, Greensboro:

The following have been appointed as members of the Committee on President's Address: Dr. Z. L. Edwards, Dr. E. B. Howle, and Dr. F. L. Hunt. We ask this Committee to get down to business as soon as convenient and let us have their report.

At this time I would like to bring up a matter. Dr. H. L. Walters, of Warrenton, a life member of this Society, has now been seriously ill in Johns Hopkins Hospital in Baltimore for two months. It is the first time Dr. Walters has missed a meeting I think in twenty-three or twenty-four years. I would like for the North Carolina Dental Society to send Dr. Walters a telegram, wishing him sympathy and a speedy recovery from his illness. I make that as a motion. (This motion was seconded by several members.)

President Jones:

We have a letter from Dr. Walters I would like to have read at this particular time, before putting the motion. "Dr. Paul Jones, Winston-Salem, N. C. Dear Paul: It is with sincere regrets that I am unable to attend the meeting. Have been a patient here since March 22. Your program looks very interesting. Please express my regrets to the Society, together with my wish that this may be the most successful meeting. H. L. Walters."

You have heard the motion. Is there any discussion? All in favor of the motion will say "aye." (Carried unanimously.)

I would like to recognize at this time, Dr. Joe S. Betts, of Greensboro, who will present the guest speaker at this time.

Dr. Joe S. Betts, Greensboro:

Mr. Chairman, members of the North Carolina Dental Society: Our program committee has done excellent work this year, in keeping with some of the other program committees over a period of years. We have not spared any pains or expense in putting forth a program that would not only compare with the very best, but that would be counted the best. We have gone to different points of the compass; we have laid our hands upon prominent men to come and fill positions on our program; and we have, over a period of years, more or less deserved the name of being one of the most progressive dental societies. Our programs have been commented upon by men who were competent of expressing an opinion, and their opinions have been most favorable. And the men who have come to us have gone away with this expression: "You certainly pulled off one of the best meetings that I have ever attended." Now, I have heard this myself, as I met these fine fellows of the nation, from here there and yonder.

We have a man on our program for this morning, who comes from one of our colleges that occupies first rank. And we all know Dr. Bunting, I don't have to tell you where he stands. Unfortunately Dr. Bunting is providentially hindered from being with us this morning, but having us in mind, and knowing that we were expecting something good, he sent a man to take his place. And when I gave him the once over awhile ago, I said he has made no mistake. He has sent one of his associates there in Ann Arbor, Michigan, to take his place. I have no

hesitancy in saying that I expect Dr. Philip Jay to fill the place on the program quite as well as Dr. Bunting.

It is my pleasure to introduce to this audience, Dr. Philip Jay, of Ann Arbor, Michigan. (Applause.)

(Editor's Note: Dr. Jay asked that his lecture not be printed because much that he would say was still in the experimental stage. We accede to his wishes. Discussion of his lecture follows):

President Jones:

Before entering the discussion on Dr. Jay's paper, I think it would be the proper time to recognize some of our visitors. We are glad to welcome them to our meeting. Dr. Holliday (applause). Is Dr. Ivey in the room? Dr. Ivey is playing golf, I think. Is Dr. Guy R. Harrison in the room (applause). Dr. Harry Bear, of Richmond (applause). Dr. Claude Hughes (applause). Are there any other visitors? Is there any one from South Carolina? (One man stood up; applause.) Is Dr. Swenson, of Richmond, in the room (applause). Is Dr. Epps in the room (not here).

Will Dr. Harry Keel approach and make his announcements as to amusements.

Dr. Harry Keel made some announcements as to entertainment.

President Jones:

Dr. Maddux has a message or two he would like to read to the Society.

Dr. N. P. Maddux, Asheville:

We have a wire from the American Dental Association: "Greetings from the American Dental Association and best wishes for a most successful meeting. Next annual session of this Association will be held in Memphis, October 19 to 23 inclusive. Your Society is cordially invited to be present." Signed, by the Secretary.

We have a letter from Dr. Hinman's Secretary, as follows: "Mrs. Hinman has not been well since the passing of Dr. Hinman, so asks that I write you to express her sincere appreciation for the beautiful flowers sent for Dr. Hinman by the North Carolina Dental Society. She remembers in what high esteem Dr. Hinman held the North Carolina dentists, and she is particularly anxious that each one personally know of her gratitude for this remembrance." Signed, by her Secretary.

President Jones:

Now I will ask Dr. Branch to lead the discussion on Dr. Jay's paper.

Dr. Ernest A. Branch, Raleigh:

Mr. President, Ladies and Gentlemen of the Medical and Dental profession: We are delighted to have Dr. Jay down with us.

This is a subject that I know very little about, however, I believe, if I belong to any particular school it must be the latter that Dr. Jay mentioned: That the disease or decay of the teeth is a manifestation of systemic disease; and I want to base all that I have to say in trying to correlate the many things he has brought to our attention to our present conditions, both economic, systemic and otherwise, on this: Nutrition, health, and the child resistance to disease, are all bound up together in the health of the teeth. I prefer to think of the mouth as one end of the alimentary tract, and when we see the manifestations in this end we can pretty well surmise the conditions of the other. And I don't believe that we can possibly differentiate between the two or isolate one and not take into consideration the other. However, our branch of medicine deals with the end that we call the mouth, and that is our consideration now.

Now, when it comes to diet, I am satisfied that it has much to do with it and the influence that it exercises is perhaps the main solution. Because, as I said in the outset, I feel that that is a manifestation, and in order to treat that we must think of the one thing that is perhaps the greatest term in medicine—that thing we call resistance. Gentlemen, we have got to deal with it, and that is the thing that I am trying to deal with. Now, we treat that in our discussions, and turn it over in our mind, and oftentimes we have stood by the bedside of another one and seen them hanging on, and on, and on, by that thin thread, that intangible thread, which we call resistance, and wonder how long it's going to last.

Now, in our discussion of hygiene, and we think of cleanliness as connected with hygiene, I think first that we must clean up the outside. I don't understand how in our teaching, that we can possibly hope to teach a boy in school to clean up his mouth when his hair is down in his eyes and growing in his ears, and his neck crusty. And I tell the teachers if they are going to teach hygiene to never say a word to that boy about

cleaning up his mouth, unless he has cleaned up the outside. But if you will get him, teach him, and get him to clean up the outside, it will not be long until he will clean up the inside, there is something on the inside of him which we call pride that will cause him to do that. And when we can get him to clean up the inside, he will sit up straighter in school; he won't use his backbone to sit on as much as he did; he will be putting on fresher clothes in the morning; he won't wear the same old underclothes that are sour. And then, when he does that, then we can begin to teach him diet.

And another thing we must teach is, that environment in the home must be changed to make a healthier environment, and when we have the child at home in a more healthy environment, when we see that he has more rest, why then we think of that thing we call resistance. And the influences of environment at home, we know that it must be quiet, there must be peace, there must be happiness in that home.

So, we have a tremendous subject. And when we think of diet and its influences—I am not going into the bacteriology of it, I don't have that opportunity in my work, to study that part of it—but I do know that we have gone into the schools of what we call the "four hundred," where we know they have everything in the world that they desire and money can buy, and we find the cavities in the teeth, as has been outlined to you there. And the question is oftentimes asked, if colored people have better teeth than white folks; and we go into the schools of the colored, where the mothers are servants in the homes of that first-class, where they are eating the same kind of food and carrying it home with them and feeding the children, and we find practically the same number of cavities.

When we can get out in the country, though, to an old-fashioned country school house, with a door in the middle and the roof kind of giving down and the foundation weakened—we don't have many of those now—but occasionally we find one, as I did sometime back—and when we went in that colored school and examined every child's mouth, it took two children to find one cavity. And I felt then that there must be some relation in their living; and I knew that in this environment, at home there was certainly peace and quiet, there was no financial disturbances, and we know those things have an influence, too. We knew that their diet was the very plainest, with

the corn bread, turnip greens, collards, pot liquor, and buttermilk.

On the other hand we find where the conditions are not so good, conditions that sometime differ, and it occurred to me that you might know a little better what I want to say to you if I would run a few slides through there, because I want us to see, and if possible to correlate these many things that Doctor Jay has talked to us about so we can make application and take it back home with us. I was delighted at the things he brought to us. But now let's see just a few here that we might add to it.

(Slide.) Now, there is a little girl in one of our schools, that according to her age and height chart she should have weighed 112 pounds. Now, some folks take no stock in those kind of things, of weight and height standards, but we have to have a yardstick to measure by, and it happens that this is the one we are measuring by at this time. Her actual weight was 69 pounds; she is 43 pounds underweight. That is in one of our schools. Now, let's start at that thing we call resistance; look at that child—just as you see them come in your office. And I believe whenever you start dental restoration in the child's mouth, that you ought to take into consideration the resistance of that child. But there she stands; look at the arms; look at the legs; and at the age when she is about to change from the child to an adult! In her mouth three of her permanent teeth broken down to the gum-line, abscess sacs by the side of all three, and I put my fingers in her mouth and pressed those and it discharged in her mouth.

We have got to take something else into consideration, too: In her throat were two tonsils that were diseased; we can't help but take that into consideration, in considering this case. And in this present physical condition, what kind of a mother can she possibly make later on, unless something is done to correct it?

Now, as for the diet: I see them every day, at noontime, with not a thing in the world that they have carried to school to eat but some sweaty, white soppy, biscuits, and a piece of meat! I saw one the other day, unwrap her lunch from a newspaper, and the soppy biscuit had absorbed the ink from the paper, until the bread was spotted! And I saw a little girl in the same school, unwrap her lunch, that white soppy bread loaded with jelly. And I asked the children in that school to all raise their

hands that owned or had a cow, and only three families in the school raised their hands. In that same county we found twenty cases of pellagra on one plantation. We must take all that into consideration, I think.

Now, we think the automobile is killing more people than any one thing in our State; we had 750 deaths from automobiles in the State last year and 1,050 deaths from pellagra! That is a dietary disturbance, too.

(Slide.) Now, let's look at this one. This is a little girl in our schools. When you put your hand on that child's skin, it was as dry as paper; and when you put your hand in her hair, if you were not looking, you couldn't tell but what you had your hand in excelsior. The corners of the mouth scalded—you see them every day. And look in her mouth! Look at the pus standing on the gums. I gave that child a piece of cold bread to chew, for two minutes; I had her give it back, and it was discolored with blood and filled with pus.

Now, that is a local condition we are having. I am satisfied that within five years this manifestation you see in the mouth will be recognized as incipient pellagra. I don't believe medical men will wait until the skin begins to peel and the patient's mind is deranged, to say "pellagra." Now, naturally, we find, as you have found, that the decay of the teeth begins.

(Slide.) We have heard all these things; what are we going to do about it? Are you going to solve it through education? In Goldsboro, there is a problem in one of the schools. Miss Freeman, the teacher, is in sympathy and coöperates in any way possible with Dr. Johnson and Dr. Williams there, helping, and we are trying to find if we can possibly correlate those things together.

Now, we don't have the facilities that Dr. Jay spoke of, but we are doing the best we can with what we have got.

Now over in Salisbury, we have a group of first-grade children. They get off to school in the rush of the morning, without breakfast, and by ten o'clock in the morning they are hungry as bears. They haven't had the right amount of rest and sufficient amount of sleep, and they are sleepy. In this particular school they are given a warm bowl of soup and a glass of milk at ten o'clock. They haven't any cots, I wish they did; but at this time, in the first-grade room, the little teacher there found that two of those little tables were just as wide as those children were long, and they pushed two tables together and let the little

fellows get on the tables and take a nap. Did that teacher waste thirty minutes of her school day? Not at all. It was the best time of their whole activities, and well spent, because after thirty minutes of rest it was a new day to those children and they started things going all over again.

(Slide.) This one should have come before the other. That is the mid-morning lunch, but they don't call it a mid-morning lunch, they call it a tea-party, because you never saw a child in your life that would not go any distance to get to a tea-party. And the little teacher in this school has a tea-party every morning at ten o'clock. There is one child there that has gained fifty pounds, and in this very short time, and the teacher told me that they were doing better work than any first-grade pupils she had ever had.

Then as to the repeaters in their grades: I wish that I was able to go into it and discuss from the bacteriological point of view, but all I have done is try to make a local application of the many fine points that Dr. Jay has brought out to us. (Applause.)

President Jones:

We will be glad to have any discussion.

Dr. Wallace F. Mustian, Norlina:

Dr. Jay, there is one point that was brought out this morning that I would like a little information. About six years ago, I noticed in my practice, there was a young boy, fourteen years of age. He had a six-year molar which was lost through abscessed condition. This boy immediately developed septic poison and went to the hospital for six weeks. Upon his return, his father, of course, didn't want this to happen again, as he was told it was due to dental troubles. So he brought him to my office, with the result that I found eight cavities in his mouth. These cavities, of course, were in his mouth before the extraction of the six-year molar.

I put his mouth in good shape, prophylaxis, and filling all cavities. I instructed his father to bring him back to me again in five months. He returned, with thirty-two additional cavities. His father says, "There is no use filling thirty-two cavities in five months, great Jehovah, what am I going to do!"

He returned again in six months—with one cavity. Now, what made the difference? I will not try to explain that; I

will leave that to your own conclusions. Thirty-two cavities in five months, one cavity in six months.

He returned again in six months, with two cavities. I have seen him every six months since then, for a period of five years. He has had altogether five cavities in that period of time. Now there must be something there that we could connect dental caries to low resistance. It might be a disturbed function of glands, or it might be a local condition in the mouth and there might be a general lowering of resistance, or it may be due to some other causes. But that is the most marked case I have seen in some time. (Applause.)

Dr. W. F. Bell, Asheville:

I would like to ask Dr. Jay, has he done any experimenting with groups of patients other than those under institutional routine?

President Jones:

Is there any other discussion?

Dr. J. H. Wheeler, Greensboro:

Mr. President, I do not feel that I am capable of discussing this subject, as I don't know so much about it. But as Dr. Jay was giving his lecture and discussing the pictures on the screen I developed a train of thought, as to whether or not this immunity to caries is due directly to calcium and phosphorus, or whether it is due to a building up, Dr. Jay, of the functions of the body?

I know that the majority of the thought for the past few years has been that where there is a lack of calcium that we have this deficiency but where the calcium is supplied that the system does build up, if we are getting that fifteen grains of calcium per day that the body must have.

Now I am very much interested in gastro-intestinal disturbances, and I am just wondering what would be the result if children were put on this restricted diet. Now for a number of years I have been questioning every patient that has come to my office. I have done that because I had resented indiscriminate and ruthless sacrifice of these teeth that has been going on, and I am very happy to find that Dr. Bunting and many other men are now working along the line that we do not have to sacrifice them as we thought we had to do a few years ago.

Now I find that eighty per cent, at the least possible calculation, of the people have constipation, that is, they are subject to gastro-intestinal disturbances, they are having neuritis, they are having arthritis, and they are having all sorts of things that are given to toxic absorption.

And I am wondering if in this diet if it is not having another effect on the body in bringing about not only a resistance to the decay in the mouth but if it isn't also building up a general bodily resistance that we must take into consideration if that diet is given. If you will discuss that, Dr. Jay, I will appreciate it.

Dr. Stanly:

Mr. President, I am indeed grateful for the paper of Dr. Jay's, and I am very much impressed with his paper in connection with something I now recall to mind. During the war I was on an advisory board and we had thirteen men, and nine had perfect mouths, not a cavity did they have, and they had never had any fillings put in; their gums were perfect, and neither one of them ever had a toothbrush in their lives.

Among these thirteen men were two brothers. One of the brothers had a perfect mouth, the other had thirteen or fourteen cavities.

I began questioning the men as to where they came from and they told me they came from a section of the country that we might say was in a primitive state. I asked them what they ate, and they said they ate anything they could get. "Well," I says "What can you get?" they answered, "Just what we raise on the farm, catch in the creek, and kill in the swamp." I asked, "Do you have a cow?" "Oh, yes, we have milk and buttermilk." "Do you have any sugar?" "No, we don't like anything sweet." "Well," I asked, "You have a daddy and he brings you candy sometimes when he goes to town on trips, doesn't he?" he says "He doesn't ever go to town." "Well," I says "Don't you like pies and cakes?" "No, I don't like anything sweet."

So then I went to one of them that had thirteen or fourteen cavities and I say, "Now, what happened to you that you have all these cavities?" and he says "I don't know, sir." I say, "Have you been at home all the time?" he says, "No, when I was seven years old I ran away and went to Philadelphia." I says, "What did you eat?" "Oh," he says "I like those buns, those cakes, those sweet things."

So, I just wanted to add this to your storehouse of information that you are gathering from a practical standpoint. And they live in the southern part of this State, where they have never been fortunate enough, or I might say they are unfortunate enough not to be in civilization, in a way.

I just wanted to add that to this discussion. Thank you very much. (Applause.)

President Jones:

If there is no further discussion, I will ask Dr. Jay to close the discussion.

Dr. Philip Jay:

I will try to answer the more specific questions first, if I can remember them.

Now about the calcium and phosphorus and the gastro-intestinal disturbances. Of course, I can safely say that I don't know much about it. However, we have done calcium studies and phosphorus studies on groups of individuals both in institutional environment and out of institutions. Dr. McCollum and Simmons some years ago were able to produce rickets—and rickets as you know is a bone disease—by not necessarily eliminating calcium or phosphorus, but simply by disturbing the balance of calcium and phosphorus. A certain balance is necessary for a proper bone formation.

Now, what about this balance in the teeth? All that we know is that we have found calcium in the saliva in the child without caries as we did in the child who has caries, and in their blood tests the same holds true of phosphorus. So I don't believe that by feeding calcium that you will be very successful in controlling dental caries. There seems to be no scientific evidence of that so far.

Then about your diet, as I said, you can't get patients to do for themselves, that is very true, and that is why we are not putting all of our work on efforts directed toward diet. Diet is very essential, but it depends to a large extent on how they stick to that diet, you see. We have got to find something that we can do to them, as it were, and we are trying that now.

Now about this patient with thirty-two cavities. That is a very interesting case to study. I think that was due to a change, as there seems to be certain periods when there is more resistance and certain periods that they are more apt to have dental caries. For we do know that the flora of the mouth

changes; we know that there are some individuals that are more susceptible than others. Why that is, I don't know; but we have those cases. I think that the very fact that the doctor was not discouraged, but went ahead and filled the cavities, thereby cleaning up that part of it, must have had something to do with the results afterwards. But just why the difference, I don't know. But I do know that the flora of the mouth changes.

I am sorry I can't give you more information on that. But I hope after we have carried out investigations further on that we will be more able to discuss this subject of the susceptibility to dental caries. (Much applause.)

President Jones:

Doctor Jay; I would like to thank you very much for coming down here in the interest of the North Carolina Dental Society.

President Jones:

A motion to adjourn is in order at this time. Do not forget our meeting this afternoon at two o'clock. I want to congratulate you on such a large attendance here this morning.

The meeting then, at 1:00 o'clock p.m., took a recess until 2:00 o'clock p.m. this day.

FIRST DAY—MONDAY, MAY 4, 1931

AFTERNOON SESSION

The meeting reassembled at 2:00 o'clock p.m.

President Jones:

The meeting will please come to order.

I take great pleasure at this time in presenting to the Society Dr. Phin Horton, who will introduce the speaker of the afternoon.

Dr. Phin Horton, Winston-Salem:

Mr. President, and Gentlemen: For a long long time we have looked to the City of Philadelphia as the hub of things medically and surgically in the United States. We are always glad to welcome the people of Philadelphia who come to us, and today we are particularly fortunate in having one of the outstanding members of the medical and dental professions to

address us. The University of Pennsylvania is known for having such men as Garrison and Pryor, and today we have a professor of clinical maxilla facial surgery, School of Dentistry, University of Pennsylvania, who is a teacher of surgery in the Graduate School of Medicine, University of Pennsylvania, and who is connected with the Walter Reed General Hospital, Washington, D. C.

He tells me that he has changed his lecture, as he has to appear on the program again tomorrow, and he has decided to give us a different subject today, this subject being Acute Suppurative Inflammation about the Jaws.

This man is none other than, Dr. Robert H. Ivy, M.D., D.D.S., F.A.C.S., of Philadelphia, who will now address us. (Applause.)

Dr. Robert H. Ivy, Philadelphia:

Mr. President, and Gentlemen: It is proposed to discuss here some of those inflammatory conditions arising in the neighborhood of the teeth and jaws which take on a serious aspect and usually require surgical intervention in the hospital.

The acute dento-alveolar abscess is generally the result of death and infection of the pulp of a tooth, following dental caries. The process of decay first destroys a portion of the enamel and then the dentin. The cavity thus produced eventually exposes the sensitive tooth pulp, which becomes infected, inflamed and finally gangrenous. Inflammation and death of the dental pulp may also take place without visible caries, under an artificial crown or filling, or in an apparently healthy tooth where there is a history of trauma. Pyogenic bacteria then gain access to the alveolo-dental periosteum surrounding the root of the tooth, by way of the apical foramen at its apex, and if the infection is not successfully overcome, pus forms in the surrounding tissues, giving rise to the dento-alveolar abscess. The acute abscess frequently occurs as a flare-up from a long-standing chronic inflammatory condition about a tooth apex. It can also arise from a pocket beneath a flap of gum covering an impacted or partially erupted third molar tooth, or in connection with a tooth whose root is involved in a fracture of the jaw.

Symptoms. The acute dento-alveolar abscess is accompanied by all of the symptoms of acute inflammation, the gum around the offending tooth being red, tender and edematous. The pain

is very severe at first, because the pus is confined to the bone. The tooth may on inspection be found to be badly decayed, and is usually loose and tender. The pus tends to perforate the bone, generally the outer plate, opposite the root of the tooth, becoming first subperiosteal, then producing a fluctuating swelling just beneath the gum, and finally discharging through an opening into the mouth. The surrounding soft tissues of the face may be greatly swollen and edematous. There are many variations of the routes along which the pus may burrow. In the upper jaw, from the molar and premolar teeth, the maxillary sinus may be invaded; from the incisors, the floor of the nose may be perforated. Occasionally, burrowing above the attachment of the buccinator muscle, the pus may approach the external surface of the cheek. In the lower jaw also, the symptoms may vary according to the point at which the bone is perforated. If the perforation takes place high up, through the outer alveolar plate, the swelling will be in the vestibule of the mouth. If the body of the bone is perforated lower down, a swelling will appear in the submaxillary region. A subperiosteal abscess starting from a molar tooth may burrow backward and upward along the ascending ramus of the mandible and point above the zygoma.

There seems to be a misapprehension about several conditions manifested by acute swelling in the submaxillary region. It is quite common to hear the acute inflammatory swelling of dental origin referred to as swollen glands. Sebileau in 1921 pointed out the error of regarding this as a lymphadenitis, it being in reality a cellulitis by direct extension from the periosteum of the mandible. When the pus from a dental abscess perforates the outer plate of the mandible near the lower border, it produces first a periostitis, then a cellulitis of the soft tissues in the submaxillary region. That the process is chiefly one of periostitis followed by cellulitis by direct extension, and not primarily one of lymphadenitis by passage of the infection through lymph channels, is shown by several facts (Sebileau): (1) The submaxillary swelling communicates with the alveolus of the tooth. This can be demonstrated by pressure over the swelling, causing pus to be discharged through the tooth socket into the mouth. It is hardly conceivable that this discharge could occur if the pus had to follow narrow lymphatic channels. (2) If the submaxillary swelling is incised through the skin, a more or less extensive surface of denuded bone can be

felt with a probe. (3) All cases involving the molar region of the mandible are accompanied by trismus, or limited opening of the jaw. The farther back the tooth involved, the more marked the trismus. The trismus is due to a fusion of the jaw bone with the inflammatory mass, and is the most important sign in the diagnosis of acute cellulitis of bony or dental origin. Consequently, in every case manifesting an inflammatory swelling in the submaxillary region, accompanied by trismus, dental pathology should be suspected.

Occasionally, the inner or lingual plate of the mandible is perforated by a dento-alveolar abscess, in which case a tender edematous swelling appears in the floor of the mouth. When this arises in connection with molar teeth, difficulty in swallowing may be experienced. When spreading rapidly, with little tendency to localization, extending down the fascial planes toward the pharynx and epiglottis, the condition is termed Ludwig's angina. In Ludwig's angina there is a rapidly spreading, indurated swelling beneath the border of the mandible, which may in the course of twenty-four or forty-eight hours involve both sides. The edematous floor of the mouth is pushed up to a level with the tops of the teeth and covered with a grayish slough, the mouth is held open to allow room for the protruding tongue, and swallowing and respiration are greatly embarrassed. If no relief is obtained, the patient becomes cyanotic and dies, in a few days from suffocation combined with toxemia from absorption of inflammatory products. Ludwig's angina is not exclusively a sequel of dental infection, although this is the most common cause. It may follow tonsillitis and inflammatory lesions of the soft tissues of the region.

Differential diagnosis. The diagnosis of ordinary acute dento-alveolar abscess is usually easily made by symptoms and examination, but when involving the mandible there are conditions characterized by acute swelling in the submaxillary region which are frequently mistaken for it. One of these is acute submaxillary lymphadenitis. This is nearly always due to ulcerations of the oral *soft* tissues—the gums, vestibule and floor of the mouth, and the tongue. In tonsillitis and inflammations about the fauces, the lymph node beneath the angle of the jaw is involved. Acute swelling and suppuration of this node may also be caused by infection from the scalp resulting from head lice. These lymphatic swellings are almost never accompanied by trismus. Another condition frequently attributed to dental

infection is an acute painful enlargement of the submaxillary salivary gland due to obstruction of Wharton's duct by calculus. In many of the cases of this condition that have come to our notice the patients have been told that the trouble was due to infection from the teeth, and have had one or more teeth extracted without relief. The patient generally gives a history of several previous attacks, with increase in the pain and swelling especially during meals. In addition to the tender circumscribed swelling in the submaxillary region, there are edema, swelling and tenderness under the tongue and difficulty in swallowing. The absence of trismus is very important in excluding dento-alveolar abscess. The outlet of the duct near the frenum of the tongue may be reddened and pus may be expressed from it. X-ray examination will usually reveal the stone.

Treatment. Acute dento-alveolar abscess requires the same treatment as any other abscess, i. e., prompt drainage. Before frank suppuration occurs, it is unwise to attempt to "bring the pus to a head" by the application of flaxseed poultices or hot water bottles. These tend greatly to increase the inflammatory process, encouraging an abscess to point externally that might otherwise undergo resolution or open in the mouth, or favor the development of osteomyelitis. Cold moist applications of saturated solution of magnesium sulphate or boric acid and alcohol are more suitable in the preliminary stages. Patients with acute dento-alveolar abscesses frequently suffer from lack of co-operation of physician and dentist. The physician sends the patient to the dentist for removal of the offending tooth, while the dentist hesitates to extract the tooth in the acute stages. The dentist is usually blamed if complications arise, regardless of the course he pursues. If he extracts an acutely abscessed tooth and bone infection occurs, it is frequently claimed by the patient that the extraction caused the infection to spread. If he does nothing, and osteomyelitis follows, he may have a law-suit on his hands for negligence. The real negligence in most of these cases lies on the part of the patient, or the parents if the patient is a child for permitting the dental disease to progress so far without seeking attention. The question of extraction of the tooth during the acute stage of inflammation has been well summed up by Blair in an editorial entitled "The Ulcerated Tooth" in *Surgery, Gynecology and Obstetrics*, 1923, xxxvii, 847. He calls attention to the occasional aggravation of the infection and sometimes death from general sepsis fol-

lowing this procedure, and he advises postponement of the extraction until after the acute symptoms have subsided. We agree with this view, and believe that each case calls for the exercise of judgment as to just when the tooth should be removed. The principal point, when the presence of pus is suspected, is to establish drainage early by an incision through the periosteum. If the abscess points into the mouth, it may be drained by an incision through the gum, close to the bone. It is usually unnecessary to insert drainage material, but if desirable a small strip of rubber dam may be placed in the incision. This should be followed by frequent use of a hot mouth wash. Drainage of a dental abscess pointing extraorally is best effected by incision through the skin under gas anesthesia. The skin is incised with the knife, and the deeper tissues are separated by blunt dissection with scissors until the pus is reached. Rubber dam or tube drainage is usually required for several days. The incision should be planned to drain the abscess at its most dependent point; it should be adequate, but not larger than necessary; it should follow as the natural lines of the skin, and be so placed that the resulting sear will be concealed as far as possible; it should avoid severing important structures. For example, the incision for drainage of a submaxillary abscess would be made well beneath and parallel with the lower border of the mandible, in front of or behind the position of the facial artery, according to the place of greatest pointing. Incisions above the lower border of the mandible should be avoided if at all possible. Where the pus has travelled up over the ascending ramus, a single incision beneath the angle of the mandible may suffice, and a drain inserted on the outer or the inner surface of the ramus as the case may be. In more severe cases it may be necessary to make a counter incision horizontally or obliquely above the zygoma, and connect the two incisions by through and through drainage beneath the parotid gland. These incisions avoid damage to facial nerve branches and parotid gland and duct, and the resulting scars become practically unnoticeable after a short time. After the acute symptoms have subsided, the tooth originally causing the trouble should be extracted, in order to avoid recurrence.

Ludwig's angina is treated by early wide incision in the submaxillary region from the symphysis to the angle of the jaw, on each side if necessary, and reaching up to the mucous membrane of the floor of the mouth. The incisions are kept

wide open until the swelling subsides. Owing to respiratory difficulty, it is safer to operate in this condition under local anesthesia.

Osteomyelitis of the jaws. Sometimes the pus of a dentoalveolar abscess, instead of making its exit through a perforation in the bone near its point of origin, spreads through the cancellated tissue of the mandible, causing osteomyelitis. In children, the follicles of unerupted teeth are favorable to the development of osteomyelitis, as the infection is very inaccessible to treatment. In other cases, the periosteum is stripped off the bone to such an extent as to destroy the vitality of a certain portion. Certain kinds of injudicious treatment of infections about the jaws favor the development of osteomyelitis. The use of hydrogen dioxid about an infected area communicating with the bone may be responsible. When this drug comes in contact with organic material, free oxygen is given off, and in an enclosed space it tends to drive the infected material through the cancellated bone tissue. The same result may come from forcible spraying of infected tooth sockets after extraction, with compressed air syringes. The submucous injection of novocain or any drug into inflamed tissues to produce local anesthesia for the extraction of a tooth may act in a similar manner by carrying infection from the tooth into the surrounding tissues and thence to the bone.

Osteomyelitis of the jaws very rarely occurs without a focus of dental infection or trauma, such as a fracture. It has been known to follow a furuncle of the skin over the chin. It may be a part of a generalized osteomyelitis. Certain systemic factors, such as syphilis, tuberculosis, and metallic poisoning, such as mercurial, bismuth, phosphorus, or radium, may be underlying causes.

Periostitis and osteomyelitis generally result in bone necrosis, which may be molecular in character, the dead bone being thrown off in small particles, or a mass of bone may die and form a sequestrum varying greatly in extent. Cases have been recorded where the sequestrum involved the entire mandible. Regeneration of bone after necrosis is much more likely to occur in the mandible than in the maxilla.

Symptoms. Inflammatory disease of bone may be divided clinically into two stages: (a) the acute fulminating stage and (b) the more chronic stage of sequestrum formation. In its early stages, osteomyelitis is difficult to distinguish from acute

dental abscess, as there are usually severe pain, swelling and fever with both. In every dental abscess there is necessarily a localized bone infection. If the symptoms persist or involve a more extensive area of the jaw after incision and drainage of the primary abscess, the development of osteomyelitis should be suspected. In an advancing case, the swelling extends along the bone, the teeth become successively loosened, and pus is seen discharging into the mouth around the necks of the teeth. The pus also burrows from the outer surface of the bone toward the skin, and if the swelling is not incised, will perforate the skin of the face, forming sinuses. A probe passed through these openings will feel denuded bone. Exposed bone may also be visible through the mouth. At first, the dead bone is still firmly attached, but after about six to eight weeks the sequestra will loosen and in some cases be thrown off spontaneously. Pathologic fracture may occur. Quite frequently in the mandible, however, an involuerum of new bone is formed, preserving the continuity of the jaw. The X-ray affords little information in the acute stages of osteomyelitis before marked changes in the density of the bone have occurred. In the stages of necrosis, the X-ray is valuable in outlining sequestra, new bone formation, pathological fracture, relationship of teeth, etc.

Treatment. It is of the utmost importance that in all infections of the mouth there should be the strictest attention to surgical principles and that adequate drainage be provided. When there are indications that pus is present, it should be evacuated. This can sometimes be accomplished by an incision within the mouth, especially when the upper jaw is involved, but in the lower jaw external incision is usually necessary. The same principles should govern the incisions as in the case of dento-alveolar abscess. When it is evident that necrosis is going to occur, waiting for the separation of sequestra by natural processes brings about far better end results than radical removal of the diseased bone. By attending to proper drainage and cleansing by irrigation and then removing sequestra as they form, it is possible to have the lost bone almost completely replaced by new bone, with avoidance of great deformity and interference with function. On the other hand, if the diseased bone is resected before complete sequestration, there is generally great interference with regeneration, resulting in unsightly distortion of the face, maloclusion of the teeth, or non-union of the remaining portions of the bone. In many

cases, much can be done to preserve the natural contour of the bone and the normal occlusion of the remaining teeth by the application of suitable splints or ligatures to the teeth before the removal of sequestra, so that after the dead bone comes away, the remaining portion of the mandible will not collapse, but will stay in proper position until new bone fixes it permanently. When these principles have not been carried out, it may require a series of bone lengthening operations, bone grafting, or prolonged orthodontic treatment to bring about even an imperfect approach to normal conditions.

(Editor's Note: Following his talk, Dr. Ivy showed several slides to illustrate points mentioned. Since we are not able to reproduce these slides we feel that so much of the value is lost that printing this is not justified.)

Thank you very much. (Much applause.)

President Jones:

At this time I would like to introduce Dr. Guy R. Harrison, who will lead the discussion of Dr. Ivy's paper. (Applause.)

Dr. Guy R. Harrison, Richmond, Virginia:

Mr. President and members of the North Carolina Dental Society: We have just listened to a masterful presentation by a most skilled surgeon, characterized by the exercise, as all of Dr. Ivy's presentations are, of a profound surgical knowledge and judgment. Dr. Ivy has been discussing principles and that is the most important thing in any clinical fact.

Having been for a number of years a student of Dr. Ivy's work, having been so fortunate as to receive much of benefit from him, I find myself in a position of agreeing with practically everything that he has said. It places one in a difficult situation or position from what a discusser is usually expected to assume a rôle.

I want to emphasize, therefore, certain points which were brought out and illustrated. Dr. Ivy referred to the importance of partially erupted teeth in the introduction of these severe infections. To my mind, Dr. Ivy was thinking and discussing infections of a severe type, not an infection which would produce local reaction. Partially erupted teeth, which are partially covered by a flap of tissue are a source of this type of infection, as Dr. Ivy illustrated on the screen. These partially erupted teeth back in the mandible, maxillary, and molars, are far

greater important from a standpoint of infection than the fully impacted teeth with their communication with the mouth.

Under the heading of causes of osteomyelitis or severe osteomyelitis about the mandible, referring to the teeth in line of fracture. For fear that some of you may interpret this to mean that teeth in line of fracture should always be removed, I want to discuss that briefly. There are times when the removal of a tooth in the early stages of a treatment of a fracture of the mandible or maxilla is disastrous. I know that Dr. Ivy will approve of this statement. As a rule you can state that teeth in line of fracture had best be removed. Now, the exercise of that sound clinical judgment as is so splendidly exemplified in Dr. Ivy's work, has to come in, as to when is the time. And there is a great temptation here to discuss the salivary stone, but I will forego that. In this subject I am very much interested. Reference has been made to the X-ray in confirmatory diagnosis for salivary stones. Now I wish to emphasize that only by the most careful and exacting technique with repeated operations can such a percentage as 85% or 90% of stones be demonstrated by X-ray means. Now, that is no reflection on the ability of the roentgenologists, but much depends on the size of the stone. But we have to be most careful and with the most exacting technique we are very fortunate in demonstrating a little more than 85%.

I wish Dr. Ivy would explain his statement in his paper, the quotation as follows: "In children, the follicles of unerupted teeth are favorable to the development of osteomyelitis, as the infection is very inaccessible to treatment." I presume that he means when the follicle itself has become infected by a puncture or something of the kind. I wish he would explain that a bit.

In closing, Mr. President, I would like to be permitted to pay a personal tribute to our guest, whom I am privileged to call my friend. Dr. Ivy has achieved distinction not only as a civil surgeon but also as a military surgeon, not only achieving national reputation but even international fame. He is an able teacher and a forceful writer. He is also a most wonderfully gifted man in mind and generous in heart; such a man is Dr. Ivy. (Much applause.)

President Jones:

I am sure that we all appreciate this fine address, and I want to say if any of our guests will join in the discussions we will be glad to have them do so.

Dr. Stanly:

I would like to ask Dr. Ivy a question. In case of a stone, Stenson's duct, is it necessary to operate or will nature remove those stones without operating? And, if they are allowed to stay, will they separate? And, is the operation ever serious?

President Jones:

Is there any further discussion.

Dr. T. E. Sikes, Greensboro:

I would like to say that I have had a great feast listening to this splendid paper and a very capable discussion of Dr. Harrison's.

The three points I get out of it are these: First, diagnosis; second, when and when not to cut; third, where to cut.

Dr. W. F. Mustian, Norlina:

Mr. President, I have been reading right much lately from Dr. Bear of Baltimore, in reference to the green fly and the blue fly. I notice during the World War a considerable number of the boys on the battlefields were infected, I might say bloated, from the green fly or blue-bottle fly.

It appeared to Dr. Bear during the World War, in his clinical experience in the hospitals, that a greater number of these boys that had been so infected, got well—the wounds healed more readily. It appeared that the maggots developed in those tissues or caused something to develop in those tissues, some desirable substance there, that favored healing.

I wonder, Dr. Ivy, if it is possible to control the size of the sequestrum in osteomyelitis of the mandible by the use of these maggots from these flies. I wonder if you have observed in your experience or if you know anything about this treatment, and if so is it applicable under care in hospitals to use this treatment in dental conditions?

President:

Is there any further discussion? If not, I will ask Dr. Ivy to close the discussion.

Dr. Robert H. Ivy:

Dr. Stanly asked the question about the stone in Stenson's duct: I think that the calculus in Stenson's duct is probably a more serious condition than it is in the submaxillary duct. It is harder to localize, harder to get rid of, on account of the

structures which would be injured by injudicious incisions. Separation can occur with a calculus in Stenson's duct if you get a very bad abscess of the parotid gland. Stones as in the submaxillary duct are sometimes eliminated, they come out. They can be removed if they are brought forward by a little incision in the mouth. In other cases an external incision may be necessary, and it may be a complicated and quite a dangerous and disfiguring operation. Does that about answer you?

Dr. Stanly:

I thank you, sir.

Dr. Ivy:

I haven't had any experience with Dr. Bear's treatment of osteomyelitis with maggots, and I don't know whether he had used it before he died on any cases involving the lower jaw. It seems from his figures and those who have used it, to be a very rational thing to do. But I have hesitated to use it about the face on account of the repulsiveness of the thing. I wouldn't want to have maggots crawling around my face! That is about the only reason that I haven't gone into it. (Laughter.) But, I want to find out if I can, if anybody is using it with success, and if so I shall certainly see if we can't try it ourselves.

Dr. Harrison was too kind in what he said. I wish to stick to scientific matters when we come to another meeting! But there were one or two points he asked me to speak about. One was the infection in the follicles of unerupted teeth. I mean that in children, where we have an osteomyelitis, the case is often prolonged and more complicated, continues longer, because of these unerupted tooth particles in the bone. The infection gets around them and in them and it's harder to dislodge than if you have just plain bone without any tooth structure in it.

I also want to disclaim any originality as to the sign of trismus as indicating infection from the bone or from the tooth. The first one that I saw writing about it was Dr. Zebulo, a surgeon in Paris, who called attention to it in a very good paper some years ago.

Again I want to thank those who have been interested enough to discuss the paper. (Much applause.)

President Jones:

We will now have "The Inter-Dependence of Dentistry and Medicine, by Dr. S. Everett Moser. (Applause.)

Dr. S. Everett Moser, Gastonia:

Mr. President, Members of the North Carolina Dental Society: Nobody appreciates the frightful responsibility any more than me to have to follow one of the most outstanding figures in American dentistry, Dr. Robert H. Ivy; but be that as it may, the responsibility is mine.

DENTISTRY AND MEDICINE

To teach is a good way to get an education. If you want to know all about a subject, write a book on it, a wise man has said. If you wish to know all about things, start in and teach them to others. Since I am ready to rewrite this paper I am more convinced that Elbert Hubbard was right when he said, "If you write a paper for a learned Society, you are the man who gets the benefit of that paper—the society may." When asked by the Secretary for the subject of my paper, I gave as the subject, "Dentistry and Medicine." No doubt I could have chosen a more suitable phraseology due to the substance of my paper, however, it is a proverb of no mean import that the subject of a paper means little.

There has been a great deal written and said during the past few years with reference to Dentistry and Medicine, the relationship of oral conditions and conditions elsewhere, and the growing interdependence of one to the other. It seems, however, that most of this writing and talking has been done by the medical men. The various medical societies over the State, that is, the county societies, are extending the dentists invitations to become associate members of their societies. They are still beckoning for us to come, and my paper is more of an appeal for that coöperation between dentist and physician, which is absolutely essential in the scientific treatment of disease.

In the first place, may I give you a comparative history of dentistry and medicine? Dentistry is a very young profession as compared with medicine. May we go back a little in the beginning of our discussion? Herodotus speaks of the means of preserving the teeth, and artificial teeth are alluded to by the Greek and Latin poets. Hippocrates, contemporary with Herodotus, and commonly referred to as the father of the science of medicine, also described relief of rheumatism by the extraction of teeth; but it is very probable that physicians in ancient days looked after the welfare of the teeth. According to history, the first dental periodical of this or any other country, appeared for the first time in 1839. The Baltimore College of Dental Surgery was organized in the year 1839 also, the first dental college in the world. It might be said as a distinct and definite profession, this was the birth of dentistry. Medicine and dentistry were from that year practically divorced. I quote from an article written by Dr. Ralph R. Byrnes, appearing in the American Dental Journal in which he says "Chappin A. Harris, one of the principal founders of the Baltimore College first petitioned several of the medical schools to include dental courses in their curriculums. These offers were spurned by every medical college to

which they were made, and the establishment of the Baltimore College of Dental Surgery as a separate teaching institution was effected as a last resort, only after all assistance and encouragement had been denied by the medical profession." What a marked contrast there is from that today.

At the beginning, no preliminary or academic education was required for entrance, and, as a profession, dentistry had very little standing, being considered more on the order of a trade. To obtain a graduate's degree, the student was required to attend two courses of lectures, extending over a period of four months each, which included Dental Pathology, Dental Surgery and Dental Mechanics. A great many other colleges were organized during the following years, but it was not until the year 1867 that a dental department was opened and taught as a branch of medicine. This movement was sponsored by Harvard University.

Now just a few statements with reference to the opinion of the profession at that time: People regarded dentistry as more of a trade than a profession. However, it was not to be held in such esteem very long. Almost over night it grew in the estimation of the public mind, and today is regarded by the great body politic as a branch of health service, an art, a science, a profession contributing to the general welfare of the human race. It has grown to the extent that today it ranks with medicine. The academic requirements have been raised until today the student wishing to study dentistry must have a diploma from an accredited high school, one year pre-dental or pre-medical work in a reputable college, and then four years in dentistry. Therefore, the training of the modern dentist requires a great deal more than mere mechanical work or skill. The modern dentist must be a competent surgeon in his field, and he must have a sufficient knowledge of general medicine to diagnose other conditions which might be due to infections of some nature in the oral cavity.

The science of medicine dates back to a few hundred years before Christ—at least medicine dates back that far. To be exact, Hippocrates, the Greek scientist and father of medicine, lived 460-356 B. C. The first public lectures in medicine to be given to a body of students in this country are said to have been delivered by Dr. William Hunter, of Newport, R. I., in the year 1752. These lectures were given before the organization of the Medical School of Philadelphia, now the Medical College of the University of Pennsylvania, in 1765. To obtain a graduate's degree in medicine now it is necessary that one have the high school diploma, two years pre-medical training, and four years in medicine. Some states require two years internship in a hospital before the applicant can even take the examination. While we have no reasons to rest on our laurels, you can readily see what a wonderful progress dentistry has made, and her progress is the result of her own efforts. There is yet much progress to be made; the academic requirements should be the same as medicine.

While a few years ago medicine divorced dentistry, yet today medicine regards dentistry as a branch of medicine, and today the two are regarded as an integral part of the whole. Charles Mayo,

the eminent surgeon, says: "Talking of the interdependence of medicine and dentistry is like talking of the interdependence of medicine and surgery, or medicine and obstetrics. The practice of medicine includes dentistry and dentistry is the practice of a special branch of medicine, as in ophthalmology." "It may be going too far," he further states, "to say that all dentists should be doctors of medicine, but certainly all dentists should know much about the practice of medicine as a whole; and, conversely, all physicians should know more about dentistry, its importance and possibilities." The sooner we realize that growing interdependence of the dental and the medical professions, just that soon we will render to our patients the very best service. We have some dentists who complain that they are willing to coöperate with the medical group, but that they have found some physicians just a bit obstinate along this line. That is absolutely true in some cases, and it is also true that some of our dentists, when approached by some physician with reference to some dental problem, he also finds that indifference. We still have the occasional dentist who is absolutely against this new-fangled idea that your teeth have anything to do with your joints. I can promise you, however, that if the physician or dentist is modern in every respect, and has the patient's interest at heart, that you will get that coöperation which is for the best interest of all concerned. I well remember the first year of my professional life—immediately after graduation. I seemed to have developed an inferiority complex in the presence of physicians. After a few consultations I realized that our intellectual slant was just about parallel.

I recall an incident which came under my own observation in which a dentist extracted a number of teeth after the patient's having told him that he was a diabetic, having a high blood sugar content with an abundance of diacetic acid, and as a result, precipitated diabetic coma and hastened the death of that patient. Whereas, if that dentist had referred him back to his physician to be given insulin or whatever treatment he deemed necessary to render him sugar free, no doubt he would have lived his normal span of life. It is absolutely imperative that we coöperate with the physician in cases of this kind. We are prone to lay too little emphasis on conditions of this kind: whereas, if we were to place ourselves in the patient's position we would demand that all procedures be carried out along scientific lines.

We must recognize the close relationship that exists between our specialty and other specialties in the medico-dental domains. Take for example the Eye, Ear, Nose and Throat specialist. We have patients every day who present themselves complaining with a distant joint infection with the probability of an oral cause. In this modern era, with our present modes of living, there seems to be a prevalence of arthritis, neuritis, neuralgia, and many other forms of rheumatism. We may find the patient's teeth in good condition, but when we examine the whole oral cavity we notice an infected and enlarged tonsil which may be the seat of his trouble. We, of course, refer that patient to the throat specialist. There are probably no two fields of medicine and surgery that have a closer relationship and are more dependent one upon the other than that of rhinology and

dentistry. A specialist in this field recently made the statement to me that forty per cent of his sinus cases were referred by dentists. Patients frequently find their way to our offices, when, as a matter of fact, they are typical cases for the rhinologist. This being true, it is essential that we familiarize ourselves with the signs and symptoms of sinus diseases. The reason that the patient first presents himself to us is that in most cases he does have dental symptoms. The patient usually complains with localized pains in the head, and we must know if these pains are in the back part of the head, that, in all probability, he does not have a diseased sinus. On the other hand, if he complains of pain in the front part of the head, particularly over the eye, stating that all teeth are sore on the affected side, and probably soreness in the region of the canine fossa, that, in the great majority of cases, he does have a diseased sinus. The patient usually gives a history of recent cold, and there may or may not be a discharge of pus from the affected side. Transillumination shows a shadow. Radiograms should be taken by the dentist of all the teeth, as this condition will become chronic if a devitalized or abscessed tooth should be overlooked, that is, if it be a dental cause. Many teeth have been sacrificed, no doubt, due to the ignorance on the part of the dentist with reference to the signs and symptoms of sinus disease. We extract too many teeth just because the patient wants them extracted. A young lady came to me last December demanding that I extract all teeth from the euspid back on the upper right side. I am always somewhat skeptical about daily pain when there is no obvious pathology to account for it. This girl's description of her discomfort, intermittent pain in the right side of her head all summer, and daily pain for the next three months over the right side of the nose, and over the right side of the hard palate, without any other symptoms, was suggestive of a psychoneurosis. She admitted that she was tired and worn out with teaching, and yet knew of nothing else she could do. She was necessarily facing a complete readjustment of her outlook on life. I referred her to a physician for a general examination, which showed nothing but loss of weight and strength. He passed the buck and referred her back to me. Because of the pain over the hard palate I referred her to Dr. Hart of the Matthewson Clinic. He followed the late Greenfield Sluder's work on lower half headaches and cocaineized Meckels ganglion and obtained prompt relief of pain. This was repeated once a week for three straight weeks, at which time she secured a responsible position. Whether the relief was psychic or whether it was organic, this lady is happy, and more than that she is thankful that I did not remove her teeth. Diseases of the cornea and iris may come from a diseased tooth or tonsil. Chronic infections of the tonsils and skull sinuses will certainly aggravate gingival infections, and if we do not coöperate with the nose and throat man in having these conditions cleared up, it will be impossible to get the desired results with our treatments in gingival conditions. "I often suspect chronic infections of some nature as retarding my progress in my pyorrhea treatments."

We must coöperate with the pediatrician and we must have his coöperation. According to the Bureau of Standards, Washington,

D. C., all diseases of childhood such as: whooping-cough, scarlet fever, measles and diphtheria, are on the decrease except rheumatic manifestations and their association with heart disease on the increase. It is generally agreed that acute rheumatism is the most important single cause of heart disease in early life, that is, below fourteen years of age. It is further believed that the bacteria most clearly identified with acute rheumatism are a group of streptococci. These have been isolated from the tonsillar crypts and abscessed deciduous teeth. The point is that we do know for a positive fact, that diseased teeth in children, together with large infected tonsils, may be a source of serious valvular disease. That at least gives us something to think about when we think of the number of children whom we have turned away from our offices with abscessed deciduous teeth, having failed to remove this foci of infection, and then, in a most diplomatic and tactful way, informed the mothers that they would later on, in a short time, lose those teeth. It has been estimated that 75 per cent or more of children under ten years of age are likely to have an involvement of the heart in the course of an attack of acute rheumatism. These facts are appalling, and it is high time that we, as members of the dental profession, realize our responsibility in the alleviation of disease among children. Eternal vigilance on the part of the members of the dental and medical professions is the essential thing in preventing heart conditions in children. Due to the socalled economic problem associated with children's dentistry, they are often criminally neglected. If the fee question is properly presented there should be no difficulty in getting an equitable fee. Amos and Andy are contributing their part in this dental educational campaign that is going on all over the country, telling the people, and properly so, that the care of the deciduous teeth is absolutely essential. The public may decide that this theory that we have been promulgating, that the teeth were soon to be lost, did not deserve worthy consideration. The mothers of these children, who have a pre-disposition to early tooth decay, must be educated to the value of a proper diet. We do know, as some pediatrician has stated, that irregular or delayed dentition is often the direct result of disease or of malnutrition. On the other hand, orderly eruption, excellent calcification, normal resistance to decay, are equally good indexes of a normal and a sound constitution.

Time will not permit me to mention the interdependence of dentistry and the various other branches of medicine. A volume could be written on this subject. I could not close this part of my discussion, however, without mentioning our relationship with the obstetrician. I do not know of any field in our dental practice that should give us more pleasure than in lending our coöperation to the obstetrician. There is a more pronounced feeling of appreciation in this connection, both by the physician and by the patient. As you know, the question often arises in our every-day dental practice, "should dental operations be postponed during pregnancy?" The opinion which is still held by a portion of the public that dental operations should not be done during pregnancy is absolutely wrong. The opinion of some of our most prominent obstetricians is that it not

only can be done, but that it is imperative that it should be done. The old adage, three teeth to the child, should no longer be true. A few years ago the physician cautioned his patients very carefully that they should not go about a dental office. This is no longer true. To say the least, the physician who promises to care for the pregnant woman is derelict to his duty who does not watch the oral cavity just as he watches the kidneys, liver and intestinal canal. The intelligent women of today place themselves in the hands of their physician early in pregnancy, which enables him to detect any deviation from a normal course of pregnancy; and, if he is a modern physician he will refer her to her dentist, who will contribute his part in maintaining the proper physical condition of that patient. In this way the patient can reasonably expect to pass through a normal course of pregnancy without the loss of any teeth, and in all probability with very little dental damage. The modern dentist will, of course, not perform extensive dental operations during pregnancy, but will minimize as much as possible, operative trauma, shock and postoperative discomfort. During the past few years there has been much said and written among dentists with reference to the subject of diet. Much of the research work along this line has been done by dentists with reference to the building and the maintenance of the teeth and their supporting structures. I believe that this is very commendable, and that we should know more about diet. I do think, however, that the question of diet, as relates itself to the expectant mother, should be left in the hands of the physician. We know that it is necessary that she get a diet sufficient in calcium and phosphorus; but at the same time, these are also essential factors in bone formation, and if the physician is modern he will see that these factors are adequately and effectively provided for. He simply refers the patient to you just as he refers her to the throat man. The responsibility is his and I believe, as a matter of coöperation and courtesy, it might be well to leave the diet problem in his hands. If you do have his coöperation he will certainly accept any suggestions you may have to offer with reference to diet.

Now having discussed the beginning and the growth of the great profession of dentistry, its importance, and its growing prestige and significance as a branch of health service, as an art, as a science, and as a profession, I now turn to an important phase of my discussion, namely, the maintenance of the dignity and the worth of dentistry as a profession. It is with a great deal of sincerity that I enter this part of my discussion. I have no disposition to incur the ill feeling or the unjust criticism of my associates in this great profession, and when I say what I am going to say, I have at heart the future welfare and progressive development of my great profession rather than the personal gain of any of my fellow dentists. We must learn that the dental profession is bigger than any one man or any group of men, bigger than any one theory or any group of theories. Some one has said, "I do not agree with anything you say, but will fight for your right to say it."

Some time ago I was very much interested in reading an article, "Research and Teaching," by Dr. U. G. Rickert, A.M., D.D.S., which appeared in the American Dental Journal. In this article the doctor

asks these questions: "What about the future status of dentistry? Are we really increasing our capacity for service to the extent that we had dreamed of in the past, or are we again willing to continue as a craft of skillful appliance makers? Is dentistry going to be a profession that you would advise for your son? Is it going to win the respect and the confidence that medicine and others of the learned professions have won, or is our capacity for service so limited and our economic conditions such that the individual dentist must continue to be more concerned about the business of making a living than he is about the future status of his profession?" These are questions that you and I and every other serious minded dentist who loves his profession is going to have to seriously consider. Now is the time to consider them. We must, of necessity, forget our eccentricities and face the cold facts. The world must know that dentistry is a dignified, worthy, laudable, and trustworthy profession. Certainly we dentists deem it as such, and certainly the public deem it as such. Dentistry has grown from a mechanical process into an art, a real science, closely correlated with the science of medicine. It is utterly impossible for the finite mind to grasp the importance of dentistry. Consider for a moment the immensity of the importance of child welfare. Eighty per cent of all children are badly in need of dental attention. Consider the appalling fact that twenty per cent of the people of the world ever consult a dentist. Disease is a vile, hideous monster, holding within its grasp myriads and myriads of human individuals, who in many cases are ignorant of their true condition, not knowing which way to turn or where to go. Dentistry along with medicine, is here to fight that monster and to dethrone him from his kingdom of dominion and rule. In the words of the greatest physician of all time, "I came not to be ministered unto, but to minister." So speaks this great profession to a physically diseased world.

It may seem somewhat peculiar to you that I should mention the subject of economics with reference to the maintenance of the dignity and worth of dentistry as a profession. However, there has been much discussion among dentists, yea, even controversy along this line. It has been said by some that dentistry is too high a calling to connect it with economics or the business side of dentistry. On the other hand, we do know that there is a vital connection, and, I believe, a problem that should be solved by the dental profession. The dental profession has always solved her own problems, so then why should she fall down on this one. As long as we as dentists receive remuneration for our service, and as long as the public pays for such service dental economics is a problem of our profession, if it be a problem. I believe that it is possible to develop dental economics or the management of an office in a spirit of honest research which will be absolutely compatible with the highest ideals of a professional society. There should be no conflict between ethics and economics because if we are economically unsound we are sure to be unethical with our fellowman. You can't meet your contracts, take care of wife and child, make a happy home, be a good citizen, a patriot, a leader in your community if you are economically unsound. If the dental profession fails to recognize this as an inter-

gral part of the whole, then there will be questionable codes coming into our present code of ethics. We should, however, always maintain the proper balance between sane business methods and those high ethical ideals which have placed us directly in line of professional recognition. The first requisite for successful business in our professional life is the ability to attract patients, and then after we have a plentiful supply of patients we must be able to hold them. This means that we must be able to hold their confidence. I wish to quote from an article written by Dr. John C. Warnick, entitled, "Dental Economics," and found in the American Dental Journal in which he says: "Certainly the dentist cannot retain his poise, dignity, or professional attitude while rendering a service at a price either too low or too high, and for which there is no conceivable justification which can be supported by figures or by reason." He says further, "There are four distinct erroneous methods in vogue, at the present time, of establishing dental fees: undercharging, overcharging, guesswork and charging all that it is possible to charge without arousing a protest." Some have gotten the erroneous idea or conception that economics means high powered salesmanship. It is not high-powered salesmanship. It is true that a dentist can sell a patient that which he does not need. This is true for a reason, and that reason is that the profession is based on faith. The patient who comes into my office does not know his needs. He, therefore, places himself wholly into my care, and he must, of necessity, have enough confidence and faith in me to know that I am going to minister to him in a fair manner. If I, as a dentist, take advantage of the ignorance of that patient and force him by means of high-powered salesmanship to take that which he does not need, then I have not only shaken the faith of that patient in me, but I have shaken his faith in the dental profession. That is not necessary, for then it would cease to be an esteemed, dignified, worthy profession. I have been accused of harboring a traditional antipathy to modern dental economics. Allow me to state right here that while I do not believe that it has ever been decreed that man shall become rich treating diseased conditions, I am a firm believer in economics, dental or otherwise. Dental economics teaches us how to estimate accurately the exact cost of our daily production, and thereby enables us to charge a fee that is equitable as a fair exchange for service rendered and value received. I believe, as Dr. E. B. Howle told us some two years ago, that the time is coming when our fees for fillings will more nearly approximate our present fees for bridge work. We will then be practicing preventive dentistry in an ideal manner. The public is not responsible for the present standard of charging dental fees; but, on the other hand, the dental profession is responsible for this condition. The average layman thinks nothing of being charged thirty dollars for the replacement of one tooth; whereas, if you charge him ten dollars to save that tooth, he considers that he has been overcharged. This is a problem that must be worked out by the dental profession which will take some time, but can be done. When most of us graduated from dental college we did not have the slightest idea as to what constituted a fair and equitable fee, and

as Dr. Warnick stated in his article, the fee is usually decided on one of three things: the amount of our courage, our immediate financial needs, and a guess at what the patient expected to be charged. There is a great deal expected of a professional man in any community, and it will be impossible for him to retain that grace, poise, dignity and professional attitude if he is continually harassed and embarrassed by his creditors and is unable to pay. He is, or should be, expected to contribute generously to the support of his church, civic organizations, and to all other causes which is for the advancement of the community in which he resides. I believe that the dental profession should get good fees, that is, fees that are equitable. I believe, too, that those fees should be based on the ability of the patient to pay, on the service rendered, and upon the growing demand for your services. In other words, I am not entitled to the same fee during the first year of my practice as the man who has been practicing ten years. The dentist who gets the same fee today as he received ten years ago is not making ample progress. Any growth must be gradual if it is to be substantial. It took God Almighty one hundred years to grow the mighty oak, but He can grow a mushroom over night. This is true, not only with the dental profession, but it is true with reference to any profession. It is the duty of every dentist to progress himself. May I call attention to the fact that the average dentist is a victim of Arrested Development, and that the fleeting years bring an increase of knowledge only in very exceptional cases. Health and prosperity are not always pure blessings—a certain element of discontent is necessary to spur men on to a higher life. We must think and study more. We can not progress simply resting upon the dignity of what our profession has been and what it is today. We can do it by continual study, by reading our journals, by attending the various dental meetings, by taking post-graduate courses, resident or otherwise, by keeping abreast of the times, by knowing our actual needs, by dictating to some of these supply men and not allowing them to dictate to us. There has been a tendency on the part of some supply men to revise your methods of practice every time he comes into your office. For in proportion to the number of times you change your methods will be, in a financial way, the swelling of their coffers.

In closing, may I, if you please, introduce the personal element into my discussion? I am going to undertake to draw a picture at this point—a picture that has made itself visible to me, coming out of my own varied experience as a dentist, and I am bold enough to presume that this picture is now being flashed on the silver screen of your own lives. If we could all just speak at this hour our heart's revelations, what revelations they would be. I remember very vividly my undergraduate days, how, then, I pictured myself as a finished product in my own great profession, with the world at my feet. Then I was lingering in soft green meadows and flowery paths with not a cloud in my sight to block my progress to the goal of success. Honor, success, and happiness in my profession were wisely chosen. I dreamed of mansions, high powered automobiles, servants, brilliantly equipped offices, wealthy patients, all honest and true. Then

I was ambitious, visionary, idealistic, standing aside from the crowd out there, confident that I should in a little while become famous for my skill in my chosen profession. I saw the world beckoning me to come. I saw it looking on in admiration, wondering what move I should next make. I knew nothing, then, of any despair. Little did I suspect that a dentist could be cast down by misfortune. I was convinced then that I could succeed with little effort. *That was my dream, my dream as a student.*

But then the awakening has come. I have learned a great many things since. Today, after a lapse of nine years, I see an unconcerned world. It is a sad thing that after a lapse of nine years that I find myself amid feelings that while life is grand, it isn't all grand; that while it holds its successes, it isn't all success; that while life holds its happy hours, it isn't all happy hours. My dreams of beautiful mansions, high-powered automobiles, servants and brilliantly equipped offices have faded considerably. I have learned that while some patients are wealthy, they are not all wealthy, and that while some patients are honest and true, they are not all honest and true. *Still* ambitious, visionary, idealistic, but with a firmer foundation upon which to stand. I see the world out there still beckoning me to come, myriads of people with diseased mouths, but warning me in a loud voice that I must be competent to apply the remedy. I have discovered wiser heads, more astute intellects, and greater skill than mine among men in my profession. I have discovered that notes come due, that rent is to pay, that dentistry is too much of an exact science to get by with slipshod, evasive, hypocritical work. I have learned that you cannot afford to shirk, or make-believe or practice pretense in any act of life—for all the time you are moulding yourself into a deformity. I have learned that these mistakes will come back with an irresistible force, and cost you, yea, cost you plenty. I have learned that there is a great deal of unrest in the profession, and some jealousy; that some dentists who have through their skill and initiative risen in their profession are criticised and branded as politicians. I have learned that a practice is easier to build than it is to hold. I have learned that if my fees are too high, I subject myself to criticism; if they are too low, there is likely to be criticism.

This has been the awakening; and I am thankful for it. I am grateful for these astounding revelations. Out of these revelations have come to me some real lessons. Many things I have wisely learned from the school of experience I am going to mention, if you please. I have learned that if you apply the same general economic principles that you would apply to any kind of business that your income will compare favorably with other professions. I have learned that the man who holds his profession responsible for his failure is a traitor to his profession. If he is a failure in dentistry it is *prima facie* evidence that he would be a failure in the business world. I have learned that there is no profession on earth that offers more real opportunities to the young man than does dentistry, there still being a chance for him to grow with the profession and contribute to its growth. Last, but not least, I have learned in a measure the value of real service in my profession. For some reason,

I cannot explain, that vision was shut from my view in 1922. The real value of doing good in my profession had hardly dawned upon my then astute intellect. Little did I realize then that the man with "a good heart" in any profession was the man of the hour in any age. My ambition then was to do something great, outstandingly great. Fame and honor, to be attained in my profession, were the brightest stars in the great galaxy of my hope. I thought then that the road to success would be easy to travel; that the world would readily recognize my ability as a dentist, and let me pass, yea, shove me onward and upward. But, alas, nine years of experience has taught me that I am a small man in the dental profession, passing amid a great crowd and hardly noticed. Now I pass to you my frank confession, which would be a confession of many were they to reveal it. I have since learned that no man is too small, or too poor in any profession to be of service to that profession and to his fellowman. I have learned that it is a great thing to be a statesman, to write the laws of one's country, and to sway with effective eloquence the minds of colleagues. I have learned that it's a great thing to be an author, and to express sentiment of an individual upon human minds. I have learned that it is great to be a man of wealth, to possess power, to direct changes in the industrial and commercial world with just a simple nod of the head, but it is also great to be a man in the profession of dentistry, ministering to those afflicted physically, and contributing with all possible efficiency a part in its growth and progressive development. It isn't always the wealth we accumulate in the practice of our profession; it isn't the spacious mansions we live in; it isn't these things that make for good. It is in rendering service, real service in an unselfish, unstinted manner that counts.

Don't think that I have suddenly laid aside my operating coat and donned a clerical robe. You may call this a sermon if you please. I have a different name for it. It is an appeal in behalf of my profession, a profession which is rapidly taking its place in the foremost known to man today, a profession that I love, one I have chosen as a medium for the advancement of my own personal interest and happiness, and the personal interest and happiness and physical welfare of those whom I touch in this life. I stand before this body pleading that harmony might prevail in our profession, that professional dignity, square dealing, and a better spirit of coöperation might be more and more manifest.

In conclusion just this word: These suggestions have been offered in all sincerity. Ever keep in mind the fact, that the laborer is worthy of his hire; that faith of man in any individual or group of individuals is worth more than dollars and cents; that service, real service is the greatest power operating to bring success. (Much applause.)

President Jones:

Now I will ask Dr. Hunt to lead the discussion on this very interesting paper.

Dr. F. L. Hunt, Asheville:

Mr. President, Members of the North Carolina Dental Society: Dr. Moser is to be congratulated upon taking up the discussion of the relationship between medicine and dentistry, in that he did not start out with a plea for recognition on the part of the dentists. Many of us have heard this subject discussed, and practically the whole substance of the discussion was a plea for recognition.

My observation has been, that recognition is usually given whenever it is deserved. Dr. Moser has covered pretty well that phase of his paper.

His paper has covered a good deal of territory, and the phase of the paper which I propose to discuss is one which should be interesting to the dentists at this time of a more or less depression—and I might add by way of parenthesis, as I glanced over this body of dentists this morning it seems to me that the general depression has done a certain amount of good. I don't think that I have ever observed a finer looking body of men, and a body of men who seem to be in such splendid health. Now, perhaps some of the busy men have had an opportunity to rest up a bit! I don't know what it is, but it seems to me that these fellows are looking fine.

Now, I don't just agree with Dr. Moser on his question of dental economics. It's a complicated problem, this problem of charges. Dr. Moser either stated or quoted three or four different phases of charging, undercharging, overcharging, of guessing, guess work, and charging all that the traffic will allow. Personally I don't know just how we are going to determine exactly what a dental operation is worth.

Now from the standpoint of the dentists of the State and perhaps from the citizenship of the State, I consider undercharging perhaps the greater error. The undercharging will probably create the situation outlined by Dr. Moser. Overcharging is another serious error, and by undercharging I might say, I might say first by undercharging I mean that you are not receiving a proper compensation for the service rendered, assuming that a service has been rendered. By overcharging, I don't know just what constitutes overcharging, if a real service has been rendered.

Now, as to guessing, I think you can guess about as good as you can figure the cost of an operation. How are you going

to figure the cost of an operation? Are you going to do it mathematically determined that you shall have high-powered automobiles, mansions, servants, and what not, and that in order that you shall have those things you must figure the cost of your operation and have your practice which will give you those things? Or, are you going to figure that ten thousand dollars a year is what you should have, and if you have decided that ten thousand dollars a year is your net profit, are you going to base your charging on so much per hour? Does the determination of what you believe you should have, whether it be ten thousand dollars or twenty thousand dollars, constitute a scientific basis for your charging? It doesn't seem to me that it does.

Can you overcharge for a service rendered? Yes, perhaps; but the only basis of overcharging is first to determine the expectancy of your patient and the income of your patient, and discount the bill for cash, and then you will know what the life of that patient or the health of that patient is worth. Well, that isn't really logical. But if you are going to tell me that you can make a scientific charge, I am from Missouri; I don't see how you are going to do it unless you work it out on that basis, the same as liability insurance.

So there is no possible way that you can determine exactly the value of your service from that standpoint. Now, assuming that I am reasonably correct in that statement: If you have built up a practice and you can be reasonably busy at ten dollars an hour or twenty dollars an hour, your service is worth ten dollars an hour or twenty dollars an hour, as the case may be. If you cannot maintain a practice at ten dollars an hour, but you can at four dollars an hour, your service is worth four dollars an hour from your point of view. Assuming in each instance that you are giving a value.

It doesn't make any difference how much time you give to an operation, a dental operation, if you charge two dollars an hour and your dental operation is a failure, you have overcharged your patient.

Now, it isn't just a question of dollars and cents, figuring it out on a dollars and cents basis; I disagree with Dr. Moser on that way of working it out—on the hourly basis and so much an hour. If you are going to do that, you might as well open a dental factory and conduct the business on a cost-plus basis.

Dr. Moser drew a very beautiful picture of his dream. I just expect that we have all had that dream, and it's a beautiful dream; and he finished his discussion by telling you that even after nine years he still has that dream—and that dream is the only thing that keeps us going. We can't all do these wonderful things, there are a few outstanding men in dentistry, men who have made money, but we can't all be those financial successes.

And if I could leave one thought more, above all others, that thought would be, insofar as your financial success is concerned: Don't expect to get rich in dentistry; it isn't a question of how much money you make, it's a question of how much money you save. Don't try these get-rich-quick schemes; you may get rich quick, but you will get poor quicker. And if I would offer advice to the young men in dentistry, I would say first of all, don't be satisfied with your knowledge of dentistry when you have gotten your State Board license. As Dr. Moser aptly said, your success in dentistry depends very much upon your continued study and study and study.

Now what is true of dentists is also true of physicians: There are many outstanding failures and many outstanding successes in the medical profession as there are in the dental profession. So don't be discouraged because you find now and then an outstanding man financially successful. But after all, when all is said and done, you are ready to pass on to the great beyond there is, I believe, a greater satisfaction than a financial satisfaction—a satisfaction that you have rendered a great service to humanity, regardless of whether you have been a financial success or not. (Much applause.)

Dr. McConnell:

Mr. President and Ladies and Gentlemen: It's rather the thing nowadays to have a little psychoanalysis, and I want to congratulate him in getting over a case of a mourner into a more joyful condition, and I also want to express the hope that he will not get over on the other side and have a real case of melancholia, after nine years of practice. Because in these times we have a little tendency that way.

To discuss the major subject of his paper, the relation of the dentist and the physician, I think that goes without saying, a physician needs us as much as we need him. And I, myself,

have had a great deal of pleasure in keeping up close relations with the physician in the care of our patients. I say "our patients" because now today more than ever our patients are joint patients of the dentist and the physician, not the physician's patients and the dentist's patients, but *our* patients.

Patients should be handled jointly by the dentist and the physician with the fullest possible coöperation. Your physician has his means of finding out a great many things about the patient that we have no means of finding out. The patient will state his case very often much more frankly to his physician than he will to his dentist. And especially now that we are handling so many cases of infection and dealing with the vital functions of life, why we must carry on those cases with the closest coöperation. The man who tries to heal some of those cases that Dr. Ivy was speaking of, when he has a diabetic patient, why he is no good at all unless he has the coöperation of a good physician. And that goes without saying.

On Dr. Moser getting off on dental economics: I never hear a discussion of that kind that I don't think that some of our people in discussing that subject lose sight of one of our basic laws, a great economic law that works with all business. A man can start out in the mercantile business and market his product so high that he can't sell it, or he can sell it so low he can't make a profit; and as the old definition of economies is, that is that. You have to get in the middle of the road, charge enough to get a profit and charge little enough to get the business. And that is the whole secret of it.

As to the reward that he will get, why in dentistry he will have to take a great many of his rewards in the inponderable things of life, as Dr. Hunt so well said. The great things of life are not always weighed in the scales of the money changers.
(Applause.)

President Jones:

I wish we had more time for discussion of this very able paper of Dr. Moser's, but we are running a little bit behind and I am going to ask Dr. Moser to close this discussion.

Dr. S. Everett Moser:

Mr. President, allow me to state that I appreciate the nice things that have been said about my paper. I appreciate the fact that Dr. Hunt opened the discussion on my paper. I also

appreciate the fact that Dr. McConnell discussed my paper. I consider that these two men have figured conspicuously in the history of the North Carolina Dental Society. These men are responsible in a big measure—and I say, Dr. Hunt and Dr. McConnell, without the least degree of flattery—you are responsible for some of the privileges that we enjoy today in dentistry.

As for dental economics, frankly I wish that we had had more time to discuss this phase of my paper. It's late, I realize that. It does not take a student to recognize the trend of mind; if you are in the presence of one or more dentists and the conversation begins to lag, all you have to do is to mention the subject of dental economics and you completely revive that conversation.

With reference to fees, I simply stated, and I think Dr. Hunt agrees with me—he rather disagrees with my quotation and he disagrees in part with what I said, I think—but I simply stated that you should have some reason for arriving at a fee. I think that the fee proposition is left up to individual dentists. No man is more able to place the value of his services than the dentist himself. That is the man who is rendering the service to the patient. Every dentist does not deserve the same fee, any more than that every man deserves the same salary. The most of us, I fear, get a far better fee than we deserve. That is not only true of the dental profession but it is true with reference to any profession.

I wish to thank you again for your discussion. (Much applause.)

President Jones:

Gentlemen, that concludes the program for this session of the North Carolina Dental Society.

We have scheduled here a meeting of the House of Delegates; we have some matters we want to bring up before the general session of the North Carolina Dental Society but we want to bring them up before the House of Delegates first; so, unless somebody has something particular that they want to present before this meeting, I declare this meeting adjourned.

The meeting then, at 4:30 o'clock p.m., adjourned for a meeting of the House of Delegates to follow immediately.

FIRST DAY—MONDAY, MAY 4, 1931

MEETING OF HOUSE OF DELEGATES

The House of Delegates met at 4:30 o'clock p.m.

President Jones:

The House of Delegates will please come to order.

I would like to call your attention at this time to the fact that if your delegation is not complete, you who are here from the various districts have a right to fill your delegation from members in your district. We would like to have a full representation of all the districts, if possible.

I will ask the Secretary to call the roll of the House of Delegates at this time.

PRESENT

Dr. Paul Jones, Farmville; Dr. Dennis Keel, Greensboro; Dr. N. P. Maddux, Asheville; Dr. A. D. Abernathy, Granite Falls; Dr. R. A. Wilkins, Burlington; Dr. Clyde Minges, Rocky Mount; Dr. L. M. Edwards, Durham; Dr. E. B. Howle, Raleigh; Dr. J. S. Betts, Greensboro; Dr. L. R. Gorham, Rocky Mount; Dr. A. C. McCall, Forest City; Dr. W. F. Bell, Asheville; Dr. R. A. Little, Asheville; Dr. P. R. Falls, Gastonia; Dr. L. R. Thompson, Winston-Salem; Dr. Fred Hall, Winston-Salem; Dr. Phin Horton, Winston-Salem; Dr. G. A. Lazenby, Statesville; Dr. R. B. Harrell, Elkin; Dr. H. C. Carr, Durham; Dr. H. V. Murray, Burlington; Dr. E. J. Tucker, Roxboro; Dr. J. H. Wheeler, Greensboro; Dr. O. L. Presnell, Asheboro; Dr. J. Martin Fleming, Raleigh; Dr. Victor E. Bell, Raleigh; Dr. Wallace F. Mustian, Norlina; Dr. G. Fred Hale, Raleigh; Dr. S. L. Bobbitt, Raleigh; Dr. Dewey Boseman, Wilson; Dr. H. L. Keith, Wilmington; Dr. Horace K. Thompson, Wilmington; Dr. J. E. L. Thomas, Tarboro.

President Jones:

There being thirty-three present, I declare the House of Delegates has a quorum and open for business.

Gentlemen, what business is there to come before the meeting of the House of Delegates at this time? Has anybody anything to bring up?

Dr. J. Martin Fleming, Raleigh:

I don't know whether it's the proper time to bring it up or not, but recently there has come to my hands through Dr. Spurgeou, an old paper written by Dr. Bason, one of the pioneers of dentistry in North Carolina, on the "Effects of Diseased Teeth and Gums," and was written just eighty years ago, and yet it is modern in almost every detail today.

I make a motion that this be printed in the proceedings this year, in order that it may be preserved to history.

(The motion was put and carried.)

EFFECTS OF DISEASED TEETH AND GUMS
UPON THE GENERAL HEALTH

FROM POPULAR AUTHORS

By W. F. BASON, D.D.S.
(Medico-dental Surgeon)

PHILADELPHIA:

Printed by J. H. Jones, 34 Carter's Alley
1852

In Prof. Bond's Treatise on Dental Medicine, chap. 14, we find the following introductory remarks:

That diseased conditions of the teeth and the structures adjacent to them, do exert a most pernicious influence upon the general health, is a fact as well established as any other medical observation; yet the medical profession are, as yet, with very few exceptions, entirely unaware of it.

We are not apprised that the subject is ever alluded to by lecturers on the practice of physic, when recapitulating to their classes the causes of functional disturbance and constitutional suffering: it is not noticed in the many text-books on practice; and, certainly, however frequently the physician may look into the mouths of his patients, it is very rarely that his comprehensive glance perceives any thing worthy of note in the decaying organs of mastication.

It is full time that practitioners of medicine should perceive the importance of the teeth and of their diseases; but, until they do so, it is the more important that the dentist should be able to point out the causes of obscure disease, which the physician has in vain endeavored to discover, simply because he has sought for it every where but in the right place.

It might be granted, *a priori*, that if physiological conditions of the teeth, owing to their peculiar position, association, and history,

may exercise powerful influence upon the health of other organs, pathological conditions of these same teeth cannot be entirely harmless.

Again, if we would examine the structure of a tooth, and perceive how completely its sensitive part is enclosed in an unyielding bony case, we might readily infer from the consequences of compression in other parts, that the swollen and inflamed pulp, &c., would be exceedingly painful. If, too, we would regard the close connection existing between the teeth, the rapidity with which the flash of sympathetic pain darts along the nervous cords which vitalize them, and the intolerable and protracted suffering which ensues, upon even trifling irritation of these sensitive filaments, and remember that pain itself is fully capable of deranging the whole economy, and inducing serious and fatal disorder, we might, without the aid of much reflection, adopt the very rational conclusion that the diseases of the teeth must be of considerable consequence to the entire organization. We might, also, with similar propriety, conclude that the teeth were not merely for ornament, and that mastication and insalivation are something more than mere forms of introduction to the stomach; that they are important to digestion, which is important to the entireness of the organs and the performance of function, and that if mastication, and the insalivation accompanying it, be imperfectly performed, some corresponding imperfection of digestion must result. We might also infer, from the known consequences of long-continued morbid influences, however unimportant in their immediate action, that disturbance of digestion, constantly repeated, must, in time, develope evils of a serious character.

The old pathological maxim, "ubi irritatio ibi fluxus,"* is fraught with a valuable lesson to the medical practitioner. It is true that the nervous, and to a certain degree, even the vascular forces hurry to the part which throws out the signal of distress, and all the floating energies of the system are directed to the relief of the suffering. If it can be readily accomplished, the equilibrium of the system is soon restored, and no perceptible inconvenience results. But if from the impracticable nature of the tissue or organ affected, but little relief can be given, and if the efforts of nature to accomplish cure or removal of the part, end only in accumulating about it an uncommon amount of sensibility, increasing the irritation and demanding yet more of constitutional effort to combat it, the consequence must be such a diversion of nervous influences from other parts as to weaken their force of action, and to embarrass their functions.

In short, it is easy to understand that when the first movement towards constitutional derangement has been made, if the cause continue to act, each accession of morbid condition must aggravate and extend the evil, and hence it is, that causes in themselves very slight, may, if long continued, from the influence of sympathy and the accident of relations, induce morbid conditions of the most serious character.

*"Where there is irritation, to that part will be the flow."

"Notwithstanding the evils that accrue
From loss of teeth, though neither small nor few,
The chief is this:—'tis nature's general plan,
That all the solid aliments of man,
Before admission to the secret shrine,
Where vital chemistry, with skill divine,
Transforms the cruder mass to milky chyme
By nature's metamorphosis sublime,
Should suffer comminution:—hence we find
The dental organs formed to cut and grind,
And masticate the food:—this rightly done,
The process of digestion well begun,
Results in health to each dependent part,
That feels the living impulse of the heart."

It may be necessary to explain briefly the passage of the food through the alimentary canal, and the manner in which the chyle is converted into blood. After the food is received into the stomach, it is mixed with gastric juice, which is secreted from the inner surface of the stomach; and this is found to be the immediate agent for effecting the change that the food then undergoes. After the food has been properly acted on by the gastric juice, it passes through a muscular contraction of the stomach, called the pylorus, into the duodenum. Here the food undergoes other changes, equally as important as those already produced on it in the stomach; it mixes with the bile brought by the ducts from the liver, and with the pancreatic fluid from the pancreas. Having remained some time exposed to the action of those fluids, it is separated into two parts, an excrementitious and a nutritious.

After the food has remained a certain time within the duodenum, and this separation takes place, it proceeds along the other smaller intestines, the jejunum and ileum. By means of the peristaltic contractions of these intestines, the nutritious part of the food is said to be pressed out, and this is taken up by the inhalent mouths of the lacteals. The alimentary mass parts gradually with its nutritive particles, and passes from the small into the large intestines, the cœcum, the colon and rectum.

The nutritious part of the food taken up by the lacteals, is conveyed by the different branches into the thoracic duct, and thence into the left subclavian vein, where it mixes with the blood brought back from the upper extremities. The subclavian vein terminates in the vena cava, and this in the right auricle of the heart.

It is now necessary that this new venous blood, which is of a dark color, should undergo changes indispensable to life. The right auricle contracting, the blood is propelled into the right ventricle, and from the ventricle it is farther forced through the pulmonary artery into the lungs. While circulating through them, it is exposed in the air cells to the atmospheric air taken in during respiration:—a change takes place: the blood becomes of a florid red color, subservient to the principles of life, and is returned by the pulmonary veins into the

left auricle of the heart; and passing from them into the left ventricle, this ventricle contracts and propels the blood, by means of the aorta, to all parts of the body.

“But when, from loss of teeth, the food must pass,
A crude, and rigid, and unbroken mass,
To the digestive organs; who can know
What various forms of complicated wo
May rise terrific from that single source?
For nature, once resisted in her course,
Breeds frightful things—a monstrous progeny!
Consumption, fever, palsy, leprosy,
The hobbling gout, that chides, at every breath,
The lingering pace of all-destroying death;
And apoplexy, dragging to his doom
The half-surviving victim of the tomb.
See thus the mortal life of erring man,
Reduced by vice and folly to a span;
And years of joy allotted him below,
Exchanged for fleeting months of bitter wo!”

That the general health of the body is affected by the state of the stomach and lungs, is a proposition which few, if any, will deny; and as the mouth is the chief passage by which the air enters the lungs, and as the air is affected by whatever it passes over or through, the lungs can never receive it in a pure state, except the mouth, through which it is introduced, be perfectly clean and healthy. But while any extraneous matter is permitted to accumulate and remain in the teeth, the mouth will naturally become unclean and unhealthy, imparting an infectious taint to the air which is inhaled.

Fetid breath is occasioned by the state of the mouth, and seldom results from the condition of the stomach or digestive organs, as erroneously supposed. The escape of vapor from a disordered stomach can produce only a temporary effect, but from uncleanliness of the mouth, we find the taint constant and habitual; and unless the cause be eradicated, all the spices and perfumes of the east, though they may for a moment conceal, cannot remove it.

“We respire,” says Dr. Fitch, “about twenty thousand times in twenty-four hours, and yet, for months and years, this vast quantity of air is rendered poisonous by one or more diseased teeth. How little does it avail an individual, if by every possible means the purity of the air is preserved; if no impurities are suffered to remain in the streets; if his tenements are kept clean, his apartments ventilated; if he make distant journeys at a great expense of time and money, for the benefit of pure air, and, at the same time, carry the *cloaca* of filth in his own mouth? If this state of the breath, caused by bad teeth, so affects the olfactory nerves of a person near an individual having bad teeth, what must be its effect upon the delicate and sensible tissues of the lungs of the person himself? Nature has formed the lungs most delicate and sensible, and susceptible to the slightest impressions. She has also finely tempered the atmosphere for its safe and healthy reception in these delicate organs:

but an accident, or a disease, may render it impure, unfit for respiration, and cause it, instead of harmonizing with the lungs in the most perfect manner, to exercise a baneful influence, armed with pestilence, and scattering the seeds of disease over the lungs, thus pouring the streams of deadly poison through every vein of the system. The matter thrown off from the teeth in a state of disease and putrefaction, and also some states of diseased gums, is very acrid in its nature, as is demonstrated by its vitiating the saliva so much as to cause it to dissolve and oxydate metals, even silver, and to tarnish gold. We know that many of our organs have the power of resisting, for a length of time, in a wonderful manner, the effects of injurious impressions; but with the lungs, I am disposed to believe that even slightly injurious impressions, if continued, will, sooner or late, prove to them a cause of disease and disorganization."

"But most the teeth, for various use employed,
Disturb the system when themselves destroyed:
For when these organs, yielding to decay,
In morbid exhalations waste away
The vital air, from Heaven's aerial flood.
That warms with life the circulating blood,
Bears to the heaving lungs the deadly bane,
Where all its noxious qualities remain,
While every breath the poisonous draught repeats,
And spreads disease with every pulse that beats."

DR. RUSH.—Some time in the year 1801, I was consulted by the father of a young gentleman in Baltimore, who had been affected with epilepsy. I inquired into the state of his teeth (an inquiry which is even yet very unusual in such cases, but which serves to show the superiority of Dr. R. in judgment and comprehensiveness of thought), and was informed that several of them in his upper jaw were very much decayed. I directed them to be extracted, and advised him afterwards to lose a few ounces of blood at any time when he felt the premonitory symptoms of a recurrence of his fits. He followed my advice, in consequence of which I had lately the pleasure of hearing from his brother that he was perfectly cured.

When we consider how often the teeth, when decayed, are exposed to irritation from hot and cold drinks and aliments, from pressure, by mortification, and from the cold air, and how intimate the connection of the mouth is with the whole system, I am disposed to believe they are often unsuspected causes of general, and particularly of nervous, diseases. When we add to the list of these diseases the morbid effects of the acrid and putrid matters which are sometimes discharged from carious teeth, or from ulcers in the gums, created by them; also the influence which both have in preventing perfect mastication, and the connection of that animal function with good health, I cannot help thinking that our success in the treatment of all chronic diseases would be very much promoted by directing our inquiries into the state of the teeth in sick people, and by advising their extraction in every case in which they are decayed. It is not necessary that they should be attended with pain, in order to

produce disease; for splinters, tumors, and other irritants before mentioned, often bring on disease and death, when they give no pain, and are unsuspected as causes of them. This translation of sensation and motion to parts remote from the place where impressions are made, appears, in many instances, and seems to depend upon an original law of the animal economy.

Mr. Koecker has published a number of cases, forcibly illustrating the effect of diseases of the teeth upon the general health. From these we select the following:

"Mrs. P., a lady of great respectability, under the medical care of Dr. Jule Rucco, of Leicester Square, had, some years since, continually suffered from dyspepsia, as well as from various kinds of nervous attacks of a very annoying and alarming nature. This judicious physician had for a long time suspected the cause, and frequently proposed to consult me. By the wish of the lady, however, the dentist of the family was at last sent for, and three or four teeth and roots were removed, which, according to the assertion of the dental attendant, were all that could be extracted. The disease, however, was only aggravated by this interference, and the sufferings of the patient increased more and more.

"About six months later, the doctor again urged a meeting with me on the subject, and at last I was sent for. I found the lady laboring under a complete salivation from an extraordinary sympathy of all the glands in any way connected with the teeth. On the previous night, and, indeed, for many nights preceding, she had been suffering such violent fits of convulsion as to alarm the whole family. The face was affected with an acute erysipelatous inflammation, accompanied with headache, and also with considerable derangement of the digestive functions, such as sickness, vomiting, loss of appetite, &c. By examining the mouth, I found that the previous dental treatment had been but very partial, and I proposed the removal of every tooth and root which produced irritation.

"The lady consented immediately to my proposal, and the necessary operations were performed on the 8th of October, 1824, when nine decayed teeth, some of them mere roots, were extracted. The patient was requested to rinse her mouth frequently with a diluted astringent lotion. By this simple local treatment, and by the further medical care of Dr. Rucco, she was perfectly cured in about a week after the operation.

"Very soon after her recovery, the lady was enabled to fulfil a promise of marriage which for some time had been prevented by her protracted and distressing disease. Since that period, she has enjoyed perfectly good health.

"The farther treatment of the case has, however, been delayed on the accomplishment of which, of course, the permanency of the cure will depend."

A literary gentleman in the neighborhood of London had been for some years under the medical care of Mr. J. Derbyshire, of Greek Street, Soho, on account of a constant state of derangement of his digestion.

Much sedentary occupation, and some excessive grief, had of late greatly augmented the distressing symptoms generally accompanying

this cruel disorder. His disease had assumed the character of hypochondriasis. His spirits were so dejected, and the state of his bodily health was so low, that he was no longer capable of attending to his ordinary business.

Having had some conversations with Mr. Derbyshire on the influence of disease of the teeth upon the general health, that gentleman was induced, at his next visit, to inquire into the state of his patient's teeth, and learning that they were in a very deplorable condition, he proposed a consultation with me on the subject. After a particular examination, I found every tooth in the patient's mouth more or less carious, or dead, and all the gums and sockets in a very diseased state.

On the 27th of May, 1824, twenty-one teeth and roots were extracted, all of which were more or less in a state of putrefaction—three large grinders only excepted, which were either suffering from complicated caries, or producing morbid irritation upon the other parts, from some other causes.

The mouth was restored to perfect health in the course of about six weeks. During the progress of treatment of the diseases of the mouth, the general health improved very surprisingly; and after the restoration of perfect health to all the remaining teeth, and their relative parts, the patient enjoyed uninterrupted good health, and returned to his ordinary professional avocations.

In the Dublin Medical Free Press, the following case is recorded : *Painful affection of the eye cured by extracting a tooth.*—Dr. Emench relates a case of this kind. A man consulted him on account of a painful affection of one of his eyes, which had lasted fourteen years, and occasioned great suffering. There was considerable vascularity of the conjunctiva and sclerotica, especially around the cornea, which structure itself was somewhat opaque and spotted. There was a continual flow of tears, with pain, and intolerance of light. All these symptoms were greatly aggravated by any indiscretion in diet and the use of the slightest stimulus, such as a single glass of wine. All kinds of remedies had been tried in vain, at different times, and the affection seemed incurable. On examination of the upper jaw, Dr. E. found a carious tooth in the side corresponding to that of the affected eye. The portion of the jaw around the tooth was painful, and very sensitive to the touch. The patient thought that the affection of the tooth had begun simultaneously with that of the eye. The tooth was drawn, and almost immediately afterwards the symptoms relating to the eye began to subside, and soon entirely disappeared. The affection of the eye was evidently the result of sympathy between the second and third branches of the fifth pair of nerves.

Dr. Rush (Med. Inq. and Observations on the Diseases of the Mind, p. 33) observes that "Irritation, from certain foreign matters retained in irritable parts of the body, is among the causes of insanity." He adds, "I once knew some small shot which were lodged in the foot of a school-boy, induce madness, several years after he became a man. It (insanity) has been brought on, in one instance, by decayed teeth, which were not accompanied with pain."

"Nor less the nervous sympathy conveys
Each dental malady a thousand ways.
For, as the witching music of the lyre
Is heard along each vibratory wire,
What time the heaven-instructed minstrel flings
His hurried hand among the magic strings:—
So, when disease invades the dental arch,
And strides in anguish on his angry march,
His burning touch, like the electric flame,
Flashes through every fibre of the frame;
Fever ensues, with all its raging fires,
And oft the maniac sufferer expires."

Mr. Koecker observes that, "to form a more distinct conception of the very powerful morbid influence which the diseases of the teeth and their contiguous parts must unavoidably produce upon the general constitution, it is necessary to consider the peculiarity of the structure and functions of these parts.

"The extremely hard and dense structure of the bony parts of the teeth, and the great arterial activity and nervous irritability of their lining membranes, which can so powerfully, and for so long a time, defend the teeth against general local and morbid influences, are also causes of their producing very extensive morbid effects upon the whole system. The functions of the teeth as well as of the gums, when in a healthy state, act as powerful stimuli towards their preservation, but when these parts are diseased or affected with disorder of any kind, they become constant causes of irritation upon them as well as upon the general health. The bony structure of the teeth, however, having in itself but little self-restoring power, and their peculiar functions being much less favorable to this natural process than those of any other part of the body, and the teeth and gums, periosteum and sockets, being altogether dependent upon each other, this power is much more constantly and in a much higher degree required, and seems to be much more exerted by these than by any other structures, and the more these powerful efforts are incapable of curing the dental diseases, and resisted in their efforts to remove their causes, the more active is the constitution in its attempts to resist the progress of such diseases, whilst at the same time a considerable portion of general health and strength is consumed in the struggle.

"Diseases in the bony structure, and indeed of the teeth and gums generally, when yet in their incipient stage, and without being influenced by any other causes than the local disorder itself, produce no greater constitutional effects than other local maladies; but with this difference, that their self-curative action is exerted in a proportion corresponding to the peculiar structure, functions and relations of these parts, and therefore comparatively much greater and longer continued than that produced by diseases of other parts or bones. In this state they proceed very slowly, and their morbid effects can only be detected by the most minute attention."

Dr. Fitch very well remarks that "We are not to contemn the diseases of the teeth because they seem insignificant. Many persons

are formed of a fibre so fragile, as to be broken by the slightest shock: of a stamina so delicate, as to be affected by the slightest impression. Disease in its steps at first is, as it were, soft and hesitating, weak in its powers, and slow in its progress. But every instance of indulgence, and each succeeding advantage gained, confirms its step, increases its powers, and hastens its progress, and what but a moment ago seemed a thing too insignificant to mention, now rises a monster that derides human effort, and whose sting is the arrow of death.

"Almost inappreciable are the beginnings of many fatal diseases; and could the grave reveal its secrets, I have not a doubt, when I consider the number of diseases produced by diseased teeth, that it would be found that thousands are there, in whom the first fatal impulse was given by a diseased state of these organs; and could I raise my voice so as to be heard by every medical man in America, I would say to them, attend to your patient's teeth, and if they are diseased, direct such remedies as shall restore them to health; and if in health, such means as will keep them so."

Were it possible for us to impress upon the public the importance of care and attention, to cause them to avail themselves of proper precaution for the preservation of the teeth, and to convince them of the need there is of a periodical visit to the dentist, we are sure that a large amount of pain and misery would be avoided, and many teeth would last for life, which are at present sacrificed before manhood even commences.

The reluctance felt by patients to apply to the practitioner is, we admit, unfortunately grounded in many cases upon a knowledge of the unprincipled acts of some of those usurious pretenders who disgrace the dental profession. Numerous individuals are afraid—and not without justice—to place themselves under the dentist; they have had sad experiences already of the "tender mercies" of a certain class of operators, or they have heard accounts, too authentic to be doubted, of suffering and injury undergone by their immediate friends and relations.

Thus the whole profession (and with it the public) suffers for the improprieties of a few of its members: and a benign art becomes a bug-bear to those whom it is intended to benefit. Nothing can altogether remedy this but an improvement in the profession, by which it shall purge itself of that dross which it at present contains. We would advise more caution in the choice of dentists, valuing character more than either cheapness or notoriety.

Actual pain is too frequently the only thing that will induce the patient to call on his dental adviser, and many a valuable tooth is ruined on this account.

Children should be early habituated to take care of their teeth, in order to ensure proper attention to them in after-life. At five years old they may begin to use a tooth-brush, which should be employed at least once a day. This brush must be of middling firmness, two degrees harder than goats' hair.

Particular regard should be paid to the grinding surfaces of the double teeth, as they make their appearance in the mouth, for their

unevenness often causes them to retain particles of food, and this makes them very subject to decay. These teeth require a rather hard brush, with long elastic bristles, which should be used after each meal, to remove any remains of animal or vegetable matter, before decomposition commences.

The bristles ought to be sufficiently long and elastic to penetrate into the interstices between the teeth. The opinion that using a brush with this intent removes the gums from the necks of the teeth, is erroneous: the fact being, that where gums are relaxed, spongy, and liable to bleed, the above is one of the best means of restoring them to healthy action, and causing them to adhere more firmly.

When the gums are tender and spongy, from an accumulation of tartar around the necks of the teeth, it should always be carefully removed by the dentist, after which an astringent lotion, consisting of

Tincture of Rhatany.....	2 ounces
Alum	½ drachm.
Tincture of Pellitory.....	½ ounce
Eau-de-Cologne	2 ounces

in the proportion of a teaspoonful to a half tumbler of water, in connection with the brush, will generally be sufficient to restore them to a healthy condition, unless accompanied with, or caused by constitutional derangement.

After the gums become firm, and the teeth fixed in their sockets, care should be taken to have them freed of all extraneous matter, stains, &c., so as to present a natural, clean and healthy appearance.

If the discoloration is of long standing, or firmly fixed, great care should be observed as to the means employed for its removal.

After the teeth are properly cleansed, a powder, or paste, composed of orris root, gum myrrh, nutmeg, prepared chalk, &c., thoroughly pulverized, and incorporated, in connection with clarified soap, applied once or twice a day by means of good brushes, will generally be sufficient. If the teeth are very close, floss silk, threads, tape, picks made of soft wood or quills, should be passed between and around the teeth, so as to dislodge every particle of food, and thus prevent offensive decomposition, and chemical action.

"Let each successive day unfailing bring
The brush, the dentifrice; and, from the spring,
The cleansing flood:—the labor will be small,
And blooming health will soon reward it all."

Thus the means of preserving the teeth and gums are few and simple; and yet, if fully acted upon, will generally be found efficacious.

The food of the upper and middle classes, which is generally rich, and more liable to offensive decomposition, necessitates far greater attention to keep the teeth clean, than the simple fare of the laboring man.

"So many dishes, so many disorders."—*Seneca.*

"High seasonings stimulate the appetite, turn round the wheels of life too rapidly, and wear out the body before its time; those who abstain from much wine, spirituous liquors, and hot spicy aliments, acquire an exquisite degree of delicacy in the sense of tasting, their spirits are more equal, their feelings more pleasurable, and, generally, they are much longer lived."—*Dr. Abernethy.*

The common ingredients of health and long life are:

"Great temperance, open air,
Easy labor and little care."

Dr. W. M. Robey, Charlotte:

Gentlemen, I don't know whether a discussion of dental economies would be tiresome to some of you or not, but there is a letter I received the other day stating that the writer was sending me a copy of a letter that he had written our President, Dr. Paul Jones, and that letter struck a very sympathetic chord in me, which is about the high-pressure supply houses that have brought on our economic woes. The supply house has been absolutely unethical as far as the profession is concerned. There is no reason why they should not be ruled by the same code of ethics as the dental profession. It is the code that we have, and it is a very high standard, and there is no reason why a business of that kind should not abide more or less by the same code that applies to us, and I think it applies equally to them as well as to us. And a great deal of the trouble comes from this high-pressure salesmanship on the part of the supply houses, and probably the ownership of the stock in the manufacturing concerns by some banking house rather than by individuals. I would like to know what you want to do with this letter.

The letter was read as follows:

WASHINGTON, N. C., April 23, 1931.

DR. PAUL JONES, President,
North Carolina Dental Society,
Farmville, N. C.

DEAR PAUL:

The interest which you have always manifested in furthering the progress of the North Carolina Dental Society and the services which you have rendered organized dentistry in general, justly entitle you to the love and esteem of the dental profession of North Carolina. To you and others of your calibre the rank and file will continue to look for guidance and leadership.

Now, if it is permissible for an ordinary, everyday, average member of the dental profession to speak his mind and discuss certain

theories and practices which have been puzzling him for some time, I beg your indulgence while I mention a few of them:

While I was preparing myself for the practice of dentistry, my instructors constantly reminded me that my real purpose in taking up this profession should be to serve suffering humanity and not merely look upon it as a means of making a livelihood. It was pointed out repeatedly that we should view such things from an idealistic and not a materialistic point of view. The business side of dentistry was never emphasized, which is responsible for the favorable reception of courses in Dental Economics sponsored by commercial organizations. For over one-half of a century the North Carolina Dental Society has been meeting year after year, and in all of its deliberations has pledged allegiance to the high ideals of service and the theory that our services belong to the public. I have never heard or read any lecture on Dental Economics that did not stress the joy and happiness which should be ours for the privilege of serving the public. In addition to this, speakers on the subject always suggest what they consider the most efficient bookkeeping system, the best way to collect accounts, the most desirable arrangement of office furniture, and a host of other things as assets to the economic life of our profession.

This brings me to my main point. We continue to teach at our dental meetings and practice in our offices the high idealism which characterizes a vocation worthy to be called a profession, but why in the name of justice do we not consider more seriously some aspects of the business side of dentistry? Sad though it may be, you and I number among our acquaintances fellow dentists who have been practicing their profession for a third of a century and who are approaching the allotted three score and ten with no visible means of support other than their daily labors. These men have given their best to the profession which they love. They have practiced the high ideals of service, but the love of their profession and the thought of having spread joy and happiness among the suffering, comforting as they may be, are not sufficient to furnish those things necessary for comfort and ease during the twilight days of old age.

The commercial organizations which furnish our supplies and equipment have taken advantage of our inattention to the business side of dentistry. At the beginning of the World War they began raising their prices and have continued to do so until today, with few exceptions, the prices of supplies are higher than ever before in the history of our profession. Even now, we are notified occasionally that a certain article will cost us more next time. Owing to the high cost of practicing dentistry, the time has come when, in some instances, the fees which we collect represent only a small profit on the cost of material which we use with little allowed to pay for the professional services which we love so dearly to render. Now don't you think that it is fair to assume that it is high time that the dental manufacturers and distributors reduce the prices of supplies? I have before me a report from the U. S. Department of Commerce which vividly portrays the rise and decline of prices of various articles during the past ten years. Time and space preclude the advisability of enumerating all of them. Prices for foodstuff, building ma-

terials, wearing apparel and numerous other necessities of life have declined from twenty to forty per cent during the past two years, but you have heard nothing about the reduction of prices on dental equipment and supplies.

The American Dental Trade Association is an organization composed of manufacturers and distributors. This organization not only controls the prices, but it dictates the terms between the dentist and the supply house. In other words, if you desired to buy some equipment or a lot of teeth on terms, your contract must comply with the rules and regulations prescribed by this trade organization. Your supply house, unless he violates his obligation to his trade organization, has not even the privilege of remitting the interest on deferred payments, should he desire to do so, in acknowledgment and appreciation for your having been a regular customer.

This organization has as its director and manager a high-salaried master mind with offices in Washington, D. C. I am told that his traveling expenses last year amounted to \$35,000. The supply houses must pay an initiation fee of \$500 to belong to this organization and then \$100 annual dues. Do you think the supply houses would pay out their money if they were not being amply repaid in services rendered? In the final analysis who pays it? The answer is that you and I and every other dentist pays in proportion to the amount of supplies and equipment we buy.

Please observe the contrast between an organization whose ideal is service to our fellow man and that of a commercial organization whose ideal is the accumulation of money through an unjust monopoly in dental supplies and equipment at the expense of the poor dentist who accepts the conditions even without protest. Their business ingenuity has led them to further designs upon our fast diminishing bank account. Because of rules and regulations adopted by these trade organizations, we are compelled to pay the freight, express and parcel post charges on all supplies and equipment sent to us, which represents a saving of thousands of dollars annually to each supply house. Two years ago you could buy twenty ounces of alloy at quantity rate and were permitted to take ten ounces then and have the other shipped when needed. Recently this organization has put into effect a ruling that you must take the twenty ounces when you make the purchase, otherwise you get no discount. If time permitted, I could name many other instances of their greed and audacity in imposing such unfair business methods upon us.

Now the question arises, what can we do about it? My answer is that as individuals and small groups of individuals we can do nothing but cuss out the salesman or supply house man, and that is both useless and unnecessary. If anything is to be accomplished, we must reach the "higher ups." I firmly believe that if we had a national committee composed of representatives from every state association, whose duty it would be to make a thorough investigation of the dental supply business, and if every state association would take a vigorous stand in support of this committee much good would be accomplished.

Now in emphasizing the business side of dentistry, I do not mean to minimize our duty in rendering services to suffering humanity;

let's give freely and conscientiously, but let us begin now to consider more seriously some things to which we are entitled.

You have heard much talk recently about "the right of the little man to live." I am pleading now for the right of the little dentist to live. Much has been said about farm relief, but what the members of our profession need is some dental relief—relief from unreasonable prices and from the unjust monopoly which now exists.

I hope you will pardon the length of this letter. I promise to be more brief next time. Best wishes.

Sincerely yours,

Z. L. EDWARDS.

President Jones:

You have heard the letter, what is your pleasure?

Dr. J. N. Johnson, Goldsboro:

Gentlemen, I just wish I had had time to study that letter; there is a lot in it. The man that wrote that letter is a crusader in dentistry. I listened to that paper carefully, and to my friend, Robey, of whom I have the highest regard and respect in the world. He would rather leave the burden on our supply houses. Now I want to tell you, it doesn't belong there. There is nobody in the world, I reckon, that owes them any more than I do.

In the first place a man to start out in the supply house business must put up thirty thousand dollars. And then, before he can start he must be accepted by this Association. If he is not accepted he can't start.

Now there isn't but one man in the world outside of you particular men I love and have the genuine affection for and for whom I would take my hat off, and that is my supply man—because I am always indebted to him and never able to pay him, and none of the rest of you all are. But they play the game four-square with us. Why? They have to pay for everything, just as they do the five hundred dollars and the hundred dollars initiation fee and all the rest of the things that go with that situation, and those boys pay. None of them have ever said anything to me about it, but I am not a fool.

But what we want to do is to get flat-footed behind this thing.

I make the motion that it be left to the Resolution Committee to bring in the report after the Chairman has studied about it; because it is a subject that needs consideration.

(This motion was seconded.)

President Jones:

Is there any further discussion?

Dr. Henderson:

I am not a delegate, but I would like to have just one thing to say in connection with this thing that is being discussed here. I would like to give you gentlemen the benefit of the experience that I had about a year ago. As some of you know, about eighteen months ago there was built a hospital in Pinehurst. One of our wealthy residents gave us twenty-five hundred dollars to equip a dental office in this hospital. I was selected to buy the equipment and attend to the installation of this equipment. The medical department bought a ten thousand dollar X-ray machine from the Victor X-ray Corporation. When they came to install this machine, they came up to my office and wanted to sell me a C.D. for the dental department. He told me that he would give me 5% discount for cash. I told him I would consider it. He went on back to Chicago, and in about a week or ten days time I had a letter from him saying that they had found that this C.D. X-ray machine was for the dental department, therefore, they could not give us but 2% discount, that they thought it was the medical department. They were willing to give 5% discount to the medical department but if it was in the dental department they would only give 2% because of the rulings of the American Dental Trade Association, their Association would not permit of giving but 2%.

There is another thing I want to call to your attention. As some of you people know, I was on the road selling dental supplies for nearly three years. You take Dr. J. Martin Fleming, for instance, and he buys a Ritter X-ray machine, just by way of illustration; that machine would be shipped to him from Rochester, New York, and when it arrives in Raleigh he pays the freight. I don't care what dealer he buys it from, Ritter pays the freight to that dental depot, if he buys it from Greensboro or Richmond, dealer or what not, Ritter delivers that article to the dental depot. If he buys it from a Richmond firm, Ritter pays the freight from Rohester to Richmond and Dr. Fleming pays the freight from Richmond to Raleigh, and the dealer puts that extra money in his pocket.

Now, this thing has been boiling in my mind for the last three or four years, this idea of us dentists having to pay this

extra charge on everything that we buy, when there is a profit of forty to fifty per cent on all that stuff.

President Jones:

Is there any further discussion? If not I will put the motion as put by Dr. Johnson.

(The motion was put and carried.)

Has anybody else anything they want to bring up at this time? If there is nothing that anybody has to bring up, I am going to ask for the Legislative Committee report at this particular time. Dr. J. N. Johnson.

Dr. J. N. Johnson, Goldsboro:

Gentlemen, before I start to reading this particular report I want to say that in 1911 my friend J. Martin Fleming entered his plea in a dental address at Morehead City on the 28th of June, recommending that there should be a dentist on every county board of health in North Carolina. I had no association with the legislative end of the game until 1915, in fact I really had given very little consideration to it prior to that time. But since then I have functioned as a member of the Legislative Committee and what I have learned about legislation has been due to a series of deductions made in my mind by what the men went through with that really went up against the collusion that preceded us in legislation by twenty-one years.

Now, before I read my speech, I am going to tell you, I went in to see the Governor twice. Well his stature was large and his field of vision was big, but when I talked to him, by gum, I talked to him for dentistry. It's a dental proposition. And now I am going to read this report of the Legislative Committee of the North Carolina Dental Society for 1931:

S. B. 228.

SESSION 1931

A BILL TO BE ENTITLED AN ACT TO AMEND SECTION 7064
OF THE CONSOLIDATED STATUTES, RELATING TO OR-
GANIZATION OF COUNTY BOARDS OF HEALTH BY
PLACING A DENTIST THEREON.

The General Assembly of North Carolina do enact:

SECTION 1. That Chapter 7064 of the Consolidated Statutes be and the same is hereby repealed and the following is inserted in lieu thereof, to be known as Section 7064: *County Board of Health; Organization; Term of Members; Chairman.* The chairman of the board of county commissioners, the mayor of the county town, and in county towns where there is no mayor the clerk of the Superior

Court, and the county superintendent of schools shall meet together on the first Monday in April, one thousand nine hundred and thirty-one, and thereafter on the first Monday of January in the odd years of the calendar, and elect from the regularly registered physicians and dentists of the county two physicians and one dentist, who, with themselves, shall constitute the county board of health. The chairman of the board of county commissioners shall be the chairman of the county board of health, and the presence of three members at any regular or called meeting shall constitute a quorum. The term of office of members of the county board of health shall terminate on the first Monday in January in the odd years of the calendar.

SEC. 2. This act shall be in full force and effect from and after its ratification.

REPORT OF THE LEGISLATIVE COMMITTEE OF THE NORTH CAROLINA DENTAL SOCIETY, 1931

Soon after the 1931 General Assembly convened the Executive and Legislative Committees of the North Carolina Dental Society met jointly at the Carolina Hotel, Raleigh. The members present were: of the Executive Committee, Clyde E. Minges, chairman, E. B. Howle, L. M. Edwards, and ex officio, Paul E. Jones; of the Legislative Committee, J. N. Johnson, chairman; E. B. Howle, secretary, J. Martin Fleming and E. J. Tucker. A motion was made to place a dentist, by statute, on the individual county Boards of Health. This motion met with the unanimous approval of the two committees, and the Legislative Committee immediately got to work.

The chairman of your Legislative Committee, associated with Drs. Fred L. Hunt and I. H. Davis, received his first legislative experience in the General Assembly of 1915. Also he received his first lesson in the art and artifice of lobbying from his friend Fred Hunt in that particular legislature, the basic principle being: let the other fellow do it, but keep everlastingly after him until he does it. It may surprise some of the members of this Society to know that our first dental law, 1879, read as follows: "It shall be unlawful for any person except regularly authorized physicians and surgeons to commence the practice of dentistry in North Carolina." With the knowledge of how jealous the medical profession is of its prerogatives, you can get an idea of how much the dental profession has been advanced by legislative enactment in the past fifty-two years. In the later years the ease with which successful legislation has been accomplished is due largely to the appreciation of the professional interrelationship and dependence of the physician and dentist, not only in the practice of their respective professions, but in maintaining their status quo in the State. Upon the above knowledge was based the procedure for the safe passing of our recent dental law and the retention of our representative on the State Board of Health.

Your committee let the physicians request the General Assembly to place a dentist on the county boards of health. It was done in this way: In many counties the medical and dental societies belong to the County Medical Society (we have been associated in my county for fourteen years), and through this association we have met in our

District Medical Societies physicians from all over the State. Your Legislative Committee communicated to their outstanding physician friends that they needed their support and requested them to write to their Representatives and to Senators Rivers Johnson and J. T. Burrus. When enough of them had written to Senator Burrus, Senator Johnson said to him: "Don't you think we had better introduce jointly this physicians' bill placing a dentist on the county health boards?" And it was done. But behind it was a solid organization of the dental and medical professions.

On February 6th your chairman appeared before the Wayne and Johnston County Medical Societies and received their unanimous endorsement of the dental bill. On February 9th the oratorical Clyde Minges went before the Fourth District Medical Society at Tarboro and made a powerful argument for the bill before that body, with the result of unanimous approval for them. On February 10th the equally persuasive L. V. Henderson spoke in behalf of the dental bill before the Moore County Hospital staff and the Moore County Medical Society with one hundred per cent efficiency. On February 13th our brilliant President Jones appeared before the Pitt County Medical Society with equal success. Z. L. Edwards looked after the Beaufort County Medical Society, and Percy Cone took care of Martin and Hertford. J. G. Pool and L. J. Dupree managed Lenoir, and the Greene County Medical Society under the direction of Dr. W. B. Murphy, Vice-President of the North Carolina Medical Society called a special meeting to endorse the dental bill. Other outstanding men in the medical profession to whom your Legislative Committee is deeply indebted for their support and coöperation are Dr. James M. Parrott, member of the State Board of Health; Dr. John B. Wright, President-elect of the North Carolina Medical Association; Dr. A. J. Crowell, ex-member of State Board of Health; Dr. J. G. Murphy, President of the North Carolina Medical Society, and Dr. W. Houston Moore, member of the Medical Examining Board.

The night before our bill was to be heard before the House Health Committee, Martin Fleming called me and advised me that the chiropractors were in Raleigh with a lawyer, and were to be heard with us, claiming that they were as essential to the county health boards as the dentist. Martin seemed a little troubled about it. A few minutes later my brother, Rivers Johnson, phoned and told me the chiropractors were there with a lawyer and wanted to ride in on our necks, and said, "What do you want to do about it?" I said, "Do something to get them off the dentists' necks. The dental profession has been legislating for fifty-two years, and has never tried to ride any necks, but has arrived by merit alone." Rivers replied, "Sure, we will backfire them. I will introduce a bill in the morning to abolish their examining board, and that should tame them plenty by the time we arrive at the hearing." Senators Burrus and Johnson appeared with your committee at the hearing and easily disposed of the chiropractors.

The personnel of the State Board of Health was abolished by statute, effective April 1st, and that left our dental representation up in the air. On April 2nd I was at the Governor's office in the interest of the profession, but was advised that no State Board of

Health appointments would be considered for ten days or two weeks. On April 4th I wrote the Governor requesting him to leave the appointment or rather the selection of the dental representative to the North Carolina Dental Society. On April 8th I received a letter from Dr. E. J. Tucker stating he had tendered his resignation as a member of the State Board of Health, and it had been accepted by the Governor. On April 11th I received a letter from Dr. E. B. Howle, in which he stated that Dr. Tucker was in his office the day before and was under the impression that the Governor would appoint a layman in the place of a dentist on the State Board of Health. Your chairman immediately called Mr. Nathan O'Berry, State Treasurer, and one of the best men God ever made, and asked for a conference on Sunday. With all the school facts in mind, I convinced our friend, Mr. O'Berry, that a dentist was one of the most important adjuncts to the State Board of Health, and that the selection of the representative should be left to the North Carolina Dental Society. Mr. O'Berry said that he knew what the dentists of the State are doing to relieve human suffering and in the prevention of disease, leaving out the great economic saving effected to the schools, he considered the former sufficient reason for the profession to be represented on the State Board of Health. He further said, "When I get back to Raleigh Monday morning I am going to make an appointment for you with the Governor, and I want you to tell him just what you have told me. Monday at eleven I received a wire from Mr. O'Berry stating the Governor would see me the next morning, Tuesday, at 11. The chairman of your committee was in the Governor's office at the appointed hour and received a most cordial welcome. I said everything to the Governor that was on my mind. He gave me the closest attention, and when I closed my argument with the words that I was there because I had heard he would appoint a layman instead of a dentist to the State Board of Health, the Governor said this, "I have never before now said what I am going to do or whom I was going to appoint, except what I am going to say to you now—and that is, I believe it is nothing but fair that the dental profession should select its representative on the State Board of Health. When your organization convenes at Winston, May 4th, your organization can select and recommend your representative; and furthermore, there is no politics in this" (his inference was that this was too important for politics). "I want your Society to recommend the name of only one man, and I will appoint that man. I have received hundreds of letters from dentists over the State, and from the officers of the North Carolina Dental Society in the last few days making that request." The thought passed through my head, God bless those letter-writing dentists; they have turned the trick.

Our President, Paul Jones, has met with the Legislative Committee in Raleigh seven times, and has shown great ability in legislative procedure. He knows how to locate a lost bill, and the committee is greatly indebted to him for his aid and advice. Your committee would respectfully suggest a resolution by the North Carolina Dental Society expressing their appreciation to Senators J. T. Burrus and Rivers Johnson for introducing and piloting the dental bill through

the Senate, to Representative Gurney P. Hood for steering it through the House, and to Dr. James M. Parrott, Kinston, for his support and advice.

Your chairman has made the following trips from his home in Goldsboro in the interest of legislation during the General Assembly. Seventeen trips to Raleigh, three trips to Warsaw, three trips to Farmville, and two trips to Kinston, an aggregate of 2,162 miles. He has had several hundred interviews, written a number of letters, telegrams and long distance calls at a cost to the Society of \$66.60. But the greatest incentive to the Legislative Committee and to the chairman has been the one hundred per cent coöperation received from the dental and medical professions.

Respectfully submitted,

J. N. JOHNSON, *Chairman.*
J. MARTIN FLEMING,
E. J. TUCKER,
Z. L. EDWARDS,
E. B. HOWLE, *Secretary.*

President Jones:

Gentlemen, you have heard this report, what is the pleasure of the House of Delegates?

Dr. C. E. Minges, Rocky Mount:

Mr. President, I have listened to Dr. Johnson's talk and the reading of his report of this Committee's activities, and I feel that this is one Legislative Committee that has really legislated, and I would like to move you, Sir, that that report be accepted; and I would like to add one set of resolutions to the several that are going to be sent in, and that is that each member of that Legislative Committee be personally sent a copy of this resolution thanking the people who have been active in getting this piece of legislation through. And of course when I move the report be accepted, that includes the finances, that they are to be reimbursed for their expenses.

(This motion was seconded.)

President Jones:

You have heard the motion and the second, gentlemen; what is the pleasure of the House of Delegates?

(This motion was put and carried.)

The question has been raised about this law that this Committee was instrumental in getting passed, placing a dentist on each County Board of Health, or rather authorizing the election of a dentist on each County Board of Health. I think we need to get over something in an educational way to the membership of this meeting, which will tend to outline or develop the

best men for active members of the North Carolina Dental Society for election to these places on the County Boards of Health. I would like to have some discussion or expression from this House of Delegates on that particular method of selection.

Dr. E. B. Howle, Raleigh:

I would like to move that this be referred to a general meeting, the next general meeting, this year.

(This motion was seconded and carried without discussion.)

President Jones:

Is there anything further to come before this meeting of the House of Delegates?

Dr. Little:

I would like to offer to amend the Constitution to provide that any five members of the House of Delegates may file a minority report and appeal to the general session of the Society.

Now, my reason for that, Gentlemen, is this: So far as it is now constituted, we have no appeal from the House of Delegates. Any legislation passed by the House of Delegates is necessarily law. I think the democratic way to do this is that the general assembly of this Society in convention assembled should have more power than the House of Delegates, regardless of who they are.

I don't see anything wrong about it. There is certainly nothing crooked about it, nothing political about it, but should any law be passed in this House of Delegates that any five members of this Society thinks is wrong, that any five members of the House of Delegates, not the Society, may file a minority report and appeal to the general assembly. In the Congress of the United States, the President has the veto power, here we have no veto power, whatever this meeting does is law. And I personally claim that if some adverse legislation should come up and five members see fit, that we should have the opportunity of appeal to a convention of five hundred people, and five hundred people can't be wrong. I don't see anything wrong about it, but I am just offering it as a suggestion.

Doctor S. B. Birens:

I am heartily in favor of this motion, provided the maker of the motion would agree that no more than two of such

number five can come from any one district. I don't think it would be quite right to have all of those men from one district on a minority report. I think if he would accept that amendment that no more than two such men signing any minority report should come from the same district, it would be satisfactory.

Dr. Little:

May I say just a word? Now you are going to make it political, if you do that. My kind hearted friend, Dr. Wells, had that to come up at Asheville last year. They wanted something passed up through the general assembly and they had no right in the world to do it under our present Constitution and By-Laws, and the five members could have gone up and appealed from the House of Delegates, but there was no provision for it under our present Constitution and By-Laws. Now, I don't see how in the world we are going to fix them in one district.

Dr. C. E. Minges, Rocky Mount:

I think I would be in favor of Dr. Little's proposition and also in favor of Dr. Bivens' amendment, if he would increase that number to one-third of the numerical strength of the House of Delegates, which is about thirty men. We have five from each district at the present time. Now, don't you believe, speaking to all of you as fair-minded men, that if any proposition is so important and so worthy of appeal that there will be at least one-third of the members who would join this group as quickly as five men would? And I think like Dr. Bivens, that you should not have more than three men from any district. I believe, to repeat, that if any emergency arises that requires an immediate appeal to the general assembly that he could very easily get as many as ten or eleven men on that appeal in less than five minutes, if the proposition is worthy.

Dr. Little:

Mr. President, this thing don't seem to go over so big as offered, and I am going to accept the amendment of these gentlemen, and will make it ten members, ten of them, and don't say "district," just ten men regardless of where they are from. If that suits the gentlemen, it suits me.

Dr. C. E. Minges:

That is agreeable to me.

President Jones:

According to our rules, Dr. Little, that will have to be sent up in writing and it will have to stay on the table until the next session of the House of Delegates. It cannot be acted on at this session. Under the present Constitution and By-Laws it cannot be passed on at this session.

Is there anything further to come before this meeting of the House of Delegates? If not, the meeting is adjourned.

(The meeting of the House of Delegates then, at 6:00 o'clock p.m., recessed until Tuesday night.)

FIRST DAY—MONDAY, MAY 4, 1931

EVENING SESSION

The meeting reassembled at 8:00 o'clock p.m.

President Jones:

The North Carolina Dental Society will please come to order.

At this time I am going to ask Dr. John Wheeler to introduce the essayist for his address.

Dr. J. H. Wheeler, Greensboro:

Mr. President, Ladies and Gentlemen: Probably most of us in this room recall the first X-ray machine that we ever saw and we recall the furor it created in the minds of men. We looked at the pictures that we made, or tried to make, and wondered more than once what it was all about. I recall hearing a man say some years ago, that he believed that the radiograph held more for us than we were able at that time to read; and I think that the subsequent events and studies have proven the truth of that statement. And I think I would be safe in saying tonight, the same thing that he said then, that the radiograph still holds for us more than we are able to take from it. It's a far cry from the original radiographs as started by Kells, of New Orleans, and the work done by Beecher, of Baltimore, both of whom suffered because of pioneer work that they did in this work, who have sacrificed themselves for science. And I am told that Dr. Beecher has lost several fingers, and he has lost these fingers as a sacrifice to science. Using an open gas tube with no protection is where the danger is involved

from the accumulative force of this unknown ray. But it is through such men as Kells and Beecher, and the more modern men that we could name that we have finally evolved a machine and a technique that has brought us to a point where the radiograph is absolutely indispensable in modern dental practice.

It is my pleasure to present to you tonight a man who has specialized in this work, and I don't think that we could have had a subject that is of more far-reaching importance than that subject of radiography. There is a question that has arisen more than once as to whether or not the radiograph has been productive of more good or more harm, but at this day and time there is little excuse for us to be misled to the extent where we do damage. It is my pleasure to introduce to you tonight, Dr. Houghton Holliday, of Columbia University. Dr. Holliday. (Much applause.)

Dr. Houghton Holliday, New York City:

Mr. President, Dr. Wheeler, Members of the North Carolina Dental Society, and fellow Guests:

DENTAL RADIOGRAPHY—LIMITATIONS AND PRECAUTIONS

The radiogram has become such an important factor in all phases of our work as dentists, that I think a few words of caution are in order. The X-ray has opened a new phase of diagnosis in dentistry as it has in medicine. Its convenience, its time saving qualities, and its popularity with the laity have given it a very definite place in the field of dental diagnosis. It has become an indispensable aid in any complete and thorough examination of dental conditions, and yet, I think we are in danger of leaning on it too heavily, forgetting that the radiogram is only an adjunct in the field of diagnosis. Many of us fail to read all that is printed in the radiogram, but I believe many more of us err in that we attribute to the X-ray, qualities, which it does not possess and expect the radiogram to tell us things which it is unable to portray. We must always remember that the radiogram is only a shadow picture and as such reveals only varying degrees of density in the tissues through which the rays have passed. The X-ray apparatus is not a microscope. It does not reveal the presence of bacteria or pus, as such, and it is from our knowledge of anatomy, bacteriology, and pathology that we arrive at our conclusions. The radiogram is constantly abused by those who do not appreciate its limitations. It should always be used in conjunction with all the other diagnostic means at our disposal. We should never try to make an etiological diagnosis from the negative. Daily we use the term abscess, when the only conclusion that can be drawn from a radiogram is that we have an area of lesser density. The nature of the contents must find clinical explanation.

Let us consider briefly what we may and what we should not expect from a radiogram. It does not conclusively determine the vitality or non vitality of the pulp. If the pulp has died but undergone no marked changes in density, its death is not apparent in the radiogram. If the pulp has been removed and the canals filled with a radiolucent medicament, the tooth will still appear vital. The pulp may be inflamed or dying, yet the X-ray will not reveal the fact, and there are no points of differentiation as to acute or chronic conditions. The radiogram will not show whether the roots of the bicuspid or molar teeth extend into the maxillary sinuses. Synthetic porcelain cement fillings being transparent to the X-ray, are sometimes mistaken for cavities. The small intraoral films are of no value in a study of the maxillary sinuses. For such work the large extra oral films should be used, both sinuses appearing on the same film so that they may be compared, the right with the left.

As there is no accurate method of obtaining stereoscopic intra oral films, objects all appear to lie in the same plane, superimposed one over the other. In general, objects closer to the film stand out more sharply than those further away. However, this cannot be absolutely relied upon. This flatness of the picture makes it difficult and sometimes impossible to judge the exact relationship between an area of decay and a filling, or the pulp chamber.

The virulence of an infection *is not* determinable radiographically and one cannot say from the radiogram whether the infection has been present for a long or short period of time. The size of the disintegrated area has very little if any bearing on the virulence of the infection. In line with this last statement I wish to refer you to a splendid article to appear in a forthcoming number of the Journal of Dental Research in which Dr. Ziskin concludes, after making a careful radiographic study of over a thousand cases, that aside from local reasons there is no basis for retaining or extracting pulpless teeth because of the size of the rarefied area at the root end. Too many of us are still guilty of holding a set of films up to the light and condemning or vindicating the pulpless teeth according to the size of the area of rarefaction about the apices. We can save ourselves many a blunder if we always bear in mind that the X-ray apparatus is not a microscope.

While I was associated with Dr. Gardner at the Mayo Clinic, an incident occurred which illustrates this point better than any thing I have ever heard. We had many visitors at the Clinic, even in those early days. One day I overheard a visiting dentist talking with Dr. Gardner about a set of films. He said, "Now that tooth shows very slight evidence of infection, don't you think it would be all right to retain it?" Immediately, Dr. Garner replied, "A woman came into the Clinic yesterday, she was feeling first rate, but after a careful examination, the physicians decided that she was *just slightly* pregnant."

So much for the limitations of the X-ray, now let us consider briefly what information we may expect from adequate dental radiograms. First, what constitutes an adequate survey of the teeth and alveolar processes? Of course each film must be carefully placed, the tube must be correctly aligned, the exposure must be right and

great pains must be taken in the developing and finishing. Many of us are satisfied with mediocre films. Next, how many films are necessary to give us a general survey of mouth conditions? Only a few years ago I remember we thought four films for the maxilla and three for the mandible were entirely adequate. They were often very poor films as well. Then ten films were demanded and now the fourteen film set is being generally accepted. Still some men tell us that the minimum requirement of a radiodontic examination calls for sixteen views. Well, the more information we have the better our diagnosis should be, and yet there is, I believe, a possibility of carrying it so far that it is neither desirable nor practical. I think we will all agree that the seven film set was entirely inadequate. The fourteen film set can generally be relied upon to show us two views of all the teeth except the central incisors and the third molars, and shifts the shadows of the various anatomical structures which so often cause confusion when viewed from a single position. As a rule I feel that fourteen good films may be regarded as adequate, though of course it may be necessary to take several more exposures in order to produce the fourteen satisfactory negatives. Now, how often are we going to resort to this full mouth pictures? Shall we take "full mouths" of all our patients or shall we look over the mouth and pick out the areas which we suspect are pathologic? I shall never forget the scorn which was showered upon me by the physician in charge of the X-ray work in a certain institution when I sent him a patient with full upper and lower dentures. He took the plates out of her mouth, placed them on a large film and exposed them and delivered the film to me with all the disgust that an M.D. can display toward a mere dentist. But now it is conceded unwise to ever construct dentures full or partial without first having a complete radiographic examination of the mouth. In fact a general examination rarely fails to reveal some abnormal or pathological condition which was unsuspected in the clinical examination. We cannot always rely upon pain or inflammation or discoloration to direct us to the right area. It would seem that the only excuse for not making a general examination would be when we were using the X-ray merely to check up our surgical or restorative work in a prescribed area. We must not try to fool ourselves into thinking we have given our patients an X-ray examination unless we have carefully covered the entire mouth.

Now as to the type of information which we may expect from the dental radiogram. When the root canals are filled with an opaque material or destruction of the periapical tissue has taken place, it is perfectly obvious that the pulp is dead. One can often detect cavities in proximal surfaces which have evaded detection by other means of examination. The radiogram is a great aid in extractions and the various surgical procedures in the mouth are greatly simplified by a knowledge of the number, size, shape, and position of the roots or other objects which may be gained by means of the X-ray. The presence or absence and the position of impacted teeth may be conclusively determined. Unerupted teeth are revealed and supernumerary teeth such as the diminutive extra teeth between the upper central incisor roots are common findings. The value of the

X-ray in jaw fractures is evident. The extent and position of the fracture can be made out as well as the relationship of the line of fracture to adjacent teeth. In searching for metallic foreign bodies of every description, from broken hypodermic needles to bullets and shell fragments the X-ray is practically indispensable, and poorly fitting crowns and fillings denounce their maker when viewed in the radiogram.

The X-ray most commonly serves us as an aid in the detection and study of chronic lesions of the alveolar process. It is common for an infection about a pulpless tooth to cause a disintegration of the surrounding tissue, and this is revealed in the radiogram as an area more transparent than normal tissue. Often such a rarefied area is definitely outlined, sometimes it is so diffuse as to be difficult of detection. If the rarefaction takes place in the tissue between the tooth and the X-ray film it may not be demonstrable in the negative. Hence the absence of a rarefied area does not imply an absence of infection. Occasionally the presence of irritation at the apex of a diseased tooth results in a hypertrophy of the surrounding structure rather than a rarefaction. This shows up as a light area in contrast to the surrounding normal tissue.

Granulomas and cysts are produced in conjunction with a destruction of the alveolar process and though the X-ray does not reveal etiology, it does help by showing the size and location of the lesion.

Pulp stones are not frequently detected and yet they are probably much more common than is generally supposed. As you all know, they frequently cause serious trouble in that they plug the canal and strangle the pulp. There is very slight difference between the density of the dentin and that of the pulp stone which accounts for their being frequently overlooked.

Prior to the advent of the X-ray into dentistry one had to rely almost entirely upon the symptoms of pain and swelling. And we know that the majority of chronic dental infections are accompanied by no local pain or swelling. The unfortunate result was that a system of dentistry developed which relied very largely on devitalized teeth, and teeth were killed on any or no pretext. Unknowingly dentists were sowing a tremendous crop of abscesses which were to be revealed later by the X-ray and by general symptoms varying from a vague unwell feeling to incapacitating diseases and premature death. The harvest is not yet complete, but fortunately the sowers are now few and in years to come the chronic alveolar abscess may become as rare as cases of typhoid fever are today.

Important though it is we are going to be obliged to pass over a consideration of anatomy with just a word. It is essential to know the anatomy of the parts with which we are dealing and also to be familiar with the way in which these parts, when normal, appear in the radiograph. A large number of errors are due to misinterpretation of the cancellations in the spongy bone. If we know our anatomy, detection of the pathologic is simple.

Positioning of the patient and angulation of the tube in intra-oral radiography are questions which have become so standardized and simplified in recent years by the manufacturers of the various pieces of X-ray equipment that we need say little about them in this paper.

I wish to say a word in favor of using the "bite block." Much of the trouble which is experienced in securing satisfactory views of the posterior teeth is due to the tension in the muscles of that region when the mouth is opened wide enough to permit the insertion of the thumb or finger in order to hold the film in place. The patient is very apt to swallow and thereby shift the film and the pressure of the film against the muscles often produces retching. All this can be eliminated by the intelligent use of a "bite block." The muscles are relaxed making it possible to get the film down in the desired position and the patient is much more comfortable. The film is held in a definite and uniform relation to the teeth. The position of the occlusal plane of the teeth is determined by the thickness of the block and not by the size of the patient's mouth or his ability to open it. Another point in favor of the block, which should not be ignored is the fact that the patients much prefer a clean sterile block to holding the film in place with their finger. Bending of the film which is inevitable when it is held by the finger or thumb is usually entirely eliminated by the use of the block.

In regard to angulation, I think we are all familiar with the principle of bisecting the angle, though with our modern calibrated dental X-ray units there is little occasion to think of it. I have devised a method of checking up on the central ray and find that in spite of our calibrated tube stands our most effective ray often does not strike the film at all. A simple way in which you may check yourself in this respect is to place a tack in the end of the cone on your X-ray apparatus. The tack and the target on the anode of the tube serve as the two points necessary to establish a straight line and the shadow of the thumb tack on the films when we make our exposures shows the point at which the central ray was effective. Those of you having an open end cone may fasten two fine wires with adhesive tape across the end of your cone having them cross each other at the center of the opening.

After having taken infinite pains in exposing the film, some operators think that the need for care has ceased. I think without a doubt more films are spoiled in the dark room than in any other way. A dark room need not be large but it should be so arranged that it is possible to keep it neat and clean. If any great amount of work is to be done in it ventilation must be provided and though the first requisite of a dark room is that it be dark, do not paint it black. Black walls cannot keep out light but they can go a long ways toward making the dark room work disagreeable. I have had a battle in every institution with which I have been connected to secure the repainting of the dark walls, there being a widespread belief that the black paint is essential to the room being dark. Where the volume of the X-ray work is not great and floor space is at a premium, I believe it is desirable to use a dark box which may be constructed by a carpenter or purchased through the dealers.

Since many men are still developing their films by the guess method, I want to say just a word in favor of the Tank or Time Method. Some few have acquired the art of combining the two

methods advantageously, but the Tank Method is the only safe one for most of us and is the only practical method where a large volume of work is being produced. The activity of the reducing agents in the developing solution hinges so delicately on the temperature of the solution that it seems only fool-hardy to ignore time and temperature and to expect uniformly good results. The Tank Method is valuable as a method of determining the correct exposure time, if for no other reason. No amount of developing can place detail in a film if it has not been put there by the proper exposure. Over developing can burn out detail, however, that correct developing would disclose. I hope that no periodontist uses this method of showing the regeneration of bone following his treatments. The method here would be to overdevelop the before-treatment picture and thus burn out the delicate shadows of the less dense bone between the teeth. Then a properly developed set would show the perhaps faint but definite shadow of bone where previously there had been none.

Bite-wing-films taken periodically to supplement the regular full mouth series are becoming more and more popular with dentists who aim to keep a careful check on their patients' mouth. The expense is slight and the information gained is often startling if not comforting, especially when viewing the interproximal margins of our restorations. The use of the bite wing film is an important step in the practice of preventive dentistry.

In spite of all efforts on the part of the manufacturers of X-ray equipment, X-ray work is not without danger both to the operator and to the patient. I have grouped these dangers under four headings: Danger from fire, danger from X-ray burns, danger from electrical burns, and danger of transmitting infection. The danger from fire is very remote in the case of the average dentist who has but a small quantity of films in his office. The danger is a real one, however, and one which we should not ignore. The films may now be secured in the aceto-cellulose or non-inflammable celluloid but unless you have taken especial pains you will discover that the celluloid in the mounts through which you view these films is made from nitro cellulose and represents a far greater hazard than the films themselves. After some years of effort, I have succeeded in getting the manufacturers of celluloid interested in producing the non-inflammable material in a thickness suitable for the making of mounts. At first the price was almost prohibitive, but now these may be secured at the usual prices.

X-ray burns and electrical burns are often the result of a lack of knowledge concerning the few principles of physics underlying the operation of an X-ray machine. In spite of all reasonable care there are occasional cases of X-ray burns, but these are usually the result of ignorance. Some time ago I talked with a dentist who was being treated for X-ray burns on his first finger. He had been burned while holding the films in place for his patients over a period of years. I remarked "That is one thing you will not do any more, doctor." "No," he said, "I have my assistant do it now."

Then there are cases like that of our own Dr. Kells whose contributions to dental radiography are so great that perhaps his life, lost because of X-ray burns, was not too great a price to pay.

Far more frequent than X-ray burns are electrical burns due to coming into too close contact with the high tension current. This particular danger is eliminated in the oil immersed type of apparatus. I imagine there are few of us who have worked with the X-ray for any length of time that have not had some experience with electrical burns. I had such an experience a few years ago. An operator was having difficulty with his machine and asked me to examine it. I took hold of the tube with both hands to move it away from the patient's face and then the operator for some unknown reason turned on the switch. The machine worked and a nice hot spark an inch or more in length proceeded to burn the flesh off the first fingers of both hands. I was unable to move or speak or let go of the tube. The operator was too frightened to turn off the switch, but after what seemed an eternity to me a twenty-five ampere fuse burned out and released me. The fingers healed normally and in about three months there was no evidence of the burn.

What I consider to be the most serious danger in X-ray work is the danger of transmitting infection. There is an unbroken chain in the transmission of bacteria from the mouth of one patient to that of another. True, the operator usually washes his hands between cases and at some institutions with which I am familiar, they wear rubber gloves. The washing and the rubber gloves may protect the operator but they are not sufficient to protect the patient. The operator places the film in a patient's mouth, transmits the saliva of this patient to the tube stand when he adjusts the tube and to the switch when he makes the exposure. After taking care of this patient he may wash his hands or change his gloves, but unless he washes off the parts of the machine which he handled, the saliva is passed on into the mouths of succeeding patients. I have no doubt that many colds and mouth infections are transmitted in this free exchange of sputum. I am guarding against this by going over these parts of the machine with denatured alcohol after every patient. I feel that this is a very important point and one which is almost universally ignored. There is a professional responsibility here which we have been neglecting.

(Editor's note: Following his prepared paper, Dr. Holliday threw a series of slides on the screen to illustrate some points mentioned in his paper. Since we cannot reproduce and label these slides we do not feel that the value the reader would derive justifies the expense involved in printing. Especially since it is more or less duplication and elaboration of his excellent paper. However, we do feel that the following remarks directed to two slides should be printed):

(Slide.) Here is a case of pulp stone, plugging the canal. The pulp has died and this area has resulted.

(Slide.) I put this film in, not because of these teeth, but because of this shadow over here. Shadows similar to that have often been mistaken for a root, third molar root, or for the shadow of a finger in holding the film; but it is neither, it's a

shadow of the coronoid process of the lower jaw. I once had a patient sent to me for a removal of that shadow! The dentist had told the lady that she had an impacted third molar and had tried all the morning to take it out. And then he sent her home, and after two weeks she recovered sufficiently to come back, and he called in another man to examine her with him, and the two of them worked at it all the morning. Then they packed her on the train and sent her to me, and I X-rayed her the first thing, as I always do, and I couldn't find any third molar, and it left me in a rather funny situation. And I said to the lady, "Are you sure that you have an impacted third molar?" and she said "Oh yes, I am very very sure of it, for they took a picture of it," and she pulled the picture out and showed it to me! And there it was, the shadow of the coronoid process of the mandible! Well, I said "Lady, your dental operation has done you lots of good, for there is no longer any third molar left." (Much laughter.)

I thank you kindly. (Much applause.)

President Jones:

Now I will ask Dr. Robey to lead the discussion on Dr. Holliday's paper.

Dr. W. M. Robey, Charlotte:

Mr. President, it's rather difficult to start a discussion where you can't work up any very serious differences with the essayist; and in this particular case I am frank to say that I agree with him on almost everything he has said.

There is one thing about making X-ray pictures, and that is it depends upon what you are going after as to how many pictures you will make. As to what you are trying to find. Therefore, when he says fourteen films or ten films or sixteen films, invariably that makes a little argument at that point; for the simple reason that your object in making the picture is a diagnosis, not a family album. And the result you are after will govern you as to the number of films that you make.

Every time your patient comes to see you, it doesn't justify you in making a full mouth survey; when you are familiar with the patient, it's a question of your good judgment of how often you should make that survey. I don't think that it's justifiable twice a year or once a year, unless there is some particular reason why you should think that something has

developed or you have overlooked something a short time before after having made the pictures.

Now, as to the development and that part of the technique of making X-ray pictures, I want to say that my observation among the dentists of North Carolina is, that their technique has improved quite a bit in the past few years. But I would like to urge that we get rid of these little glass bowls and little saucers and little things you develop your films in, and adopt the tank process. You can get an old storage battery and make a three compartment tank, your battery man will give you one, if you can't do anything else. By all means learn to develop your films by the time and temperature method, and in that way you can get such results that the film will be of value to your patient, and incidentally to yourself.

A very simple matter of testing out over or under exposure is by the time and temperature-tank development of your films; 65 degrees temperature, expose your film to the time that you think is proper, develop it for five minutes, see what the result is. Underexposed film will naturally be thin, showing little detail; and overexposed film will be so dark that it destroys the fine lines that the doctor refers to there. Make another exposure, shorten or lengthen your time, as the test would indicate, and you can locate yourself.

As another means of improving your technique in developing I will give you a suggestion here that may help you toward testing out your ability to make a good picture. Get a kodak and go out and take a picture, I don't care what it is, probably a face would be best because then you have to recognize the features. Then go in there and turn a kodak fiend a little while, and make up your mixture and develop them and print them, finish them up and look at the pictures and see whether you want to show them to a friend or not. If you are ashamed to show the finished work to your friend then you are not getting the right kind of results and your X-ray pictures are no better. The chances are if you don't know a good picture when you see it, if you can't recognize it in your kodak work, you wouldn't recognize it in your X-ray work, and your X-ray work requires that you get better results and finer detail than in that kind of stuff. I am just giving you a rule of thumb, suggestion, as to how to get better detail in your X-ray pictures.

The doctor has emphasized the question of the dangers of the machine. I have always emphasized that factor, but in spite of

all that every now and then I run up on somebody who says, "Well, I think I have got some novocain dermatitis, and I wear a rubber glove and I do everything, but I have got that." I will say, "Do you fool around the X-ray machine?" "Oh, yes." "Do you hold the films in your fingers?" "Oh yes, I always do that." Then I will say, "Well, I don't think you have novocain dermatitis or anything else except X-ray burn."

It is fortunate for us that these men have served before us and have found out these dangers so that now the X-ray people have built these things in the machines to such an extent that it is absolutely inexcusable that we should get electric burns or X-ray burns at the present time. It's a question of dealing with a very dangerous piece of apparatus, 45,000 volts of current and you working around it as unconcerned as if it was the 110 volt electric light in the globe socket. And you can't tell a patient all those things, if you tell a patient that you have got a thing like that there and he will probably crawl under the thing and never come back.

A good many of them don't know anything about it, but it's a dangerous thing, and some are even careless. And I do want to urge the dangers of the X-ray burns and especially to the operator, and the danger of the electric burns to the patients.

Dr. Holliday's suggestion as to beginning with the lower jaw is a splendid idea, and I think it is a thing that we could reverse, I imagine most of us begin at the upper jaw. His idea of training the patient there for a little bit will be really a great help. These items are the things that make the difference in getting good pictures, and you have taken your patient's money for nothing if you get a picture that is poor.

Why, one dentist told me a few years ago, he said "Why do you fool with developing your X-rays?" he says "I never develop my films at all, and yet I get fine results." I said, "How in the world do you manage to do that?" "Why," he said "I bought a lot of old films at a sale, and when a patient comes in I take the picture, and then go back in the dark room a few minutes and then bring out one of these pictures and say 'Why, here is what we have,'" and he said he used those pictures right along. Now, I can't vouch that that is the fact, but at the same time the patients know no better; any of you can put over a thing of that kind almost any time.

Gentlemen, I can't discuss the paper any further, because I could just go on and repeat what he said to you, because I agree

with him thoroughly and I haven't any discussion to offer. Thank you very much. (Applause.)

President Jones:

Gentlemen, at this time, before entering the general discussion of Dr. Holliday's message; we have two other numbers on our program tonight. The Medical Society has been kind enough to designate a representative here and he is in the hall, and we are going to have his paper; and then one of our own men is going to deliver a paper. We ought to appreciate these men and give them a good hearing.

Now I am going to call for a general discussion here on Dr. Holliday's paper.

Dr. E. M. Medlin, Aberdeen:

Mr. President, it takes a lot of nerve for one to follow two men like Dr. Robey and Dr. Holliday, but I am so interested in the question of radiodontia that I felt like I was forced to say just a few words.

The wonderful lecture given by Dr. Holliday is right along with the work that I have been trying to do, except for the fact that I can't put it over like he can. So on most every point in his discussion tonight, I agree with him.

There are two or three points that I just wanted to say a word about, possibly to emphasize: The first is, I want to agree with him that no dentist can tell whether a tooth is vital or alive or dead by the radiogram, nor can he tell whether the roots of the molar or bicuspids extend to the antrum. I want to recommend a more thorough treatment by radiograms than merely holding them up to the light and looking to see if there is any focal infection at the end of the roots.

In regard to the number of films to be used in a full mouth X-ray examination: In my work I recommend fourteen films; but I like to term this the initial examination. After you have started with the fourteen films as a minimum, you will know whether to make other exposures or not. We do make a full mouth in every case that comes to the office.

I want to call your attention just a minute to a case in my own experience recently, where a man was in very poor health, and his physician had been treating him and the physician said "Do you have any bad teeth or any sensitive teeth?" and he says, "I have one here and one over here." So he took a picture of those two teeth and made two exposures; not finding any-

thing he said then "You might go to your dentist." So he came to my office. I gave a full mouth X-ray examination. I found in the upper right antrum a broken off root of a bicuspid that had been extracted about seven years ago. Whether that sinus was infected or not I wouldn't make a diagnosis with my pictures on that, so I referred him to a sinus man in Charlotte. I haven't heard the result as yet.

As to the method that I have studied of holding the film without the "bite block," I believe that can be done successfully. If your patient does not want to put her hand in her mouth, you can let her wash her hands before starting the work.

I want to emphasize the time-temperature method of development. It was my pleasure to take some work in a clinic in Rochester last summer, and we made there hundreds of pictures in the short length of time. We developed some of these pictures by time-temperature method and some by sight, and the results were conclusively in favor of time-temperature method. Five minutes at sixty-five degrees. It is the only way that you can arrive at the proper exposure time.

In a recent article by Dr. Raper, he says "Don't play on the ignorance of your patient by making full mouth examinations at every visit. Make one examination and then follow that up with a periodic bite-wing X-ray examination for cavities and gum conditions and as to the condition of the pulp."

As to the dangers of X-ray. In my office I use this plan; I place the film, stand back, and let my assistant make the exposures.

I was very much interested in the discussion that Dr. Holliday made about the coronoid process of the lower jaw, showing up as an impacted molar. In my clinic tomorrow morning I hope to try to show the way of overcoming that. Thank you very much, Gentlemen. (Applause.)

Dr. Stanly:

I am not up here to emphasize any of the remarks that have been made, but I do want to add just a little to a full mouth survey. Dr. Holliday says he wants fourteen prints, and that is right, but my way of thinking we need seventeen pictures.

Now I will divert just a moment, you who were in here this morning, remember those pictures that were shown on the screen by Dr. Ivy. I do not consider any full mouth X-ray examination complete without the X-raying of Stenson's duct and

parotid duct. Little do you think the number of stones you will find in Stenson's duct if you will look for them.

I will just give you the experience of one patient that was referred to me, who had had all the molar teeth on the upper left side taken out trying to locate pains under the ear. She got no results. Then a radical antrum operation and no results. And when she was referred to me I suspected a stone in Stenson's duct and X-rayed for it, and it was there, which was causing all of that trouble. Now, I will try to tell you how I put the film to get that picture: I slipped it between the teeth and the cheek, and let the patient close her mouth. This will give you a clear picture and if there is a stone in Stenson's duct you will find it.

I have found forty-eight patients with stones in Stenson's duct and all of them were giving trouble. No longer than last week I had a patient that had been going to an ear, eye, nose and throat man for four years trying to get some relief from his ear. So when he was referred to me, I immediately suspected there was a stone in Stenson's duct, and so it proved to be. Now that man is getting along nicely, and his ear is getting better. It's just one of those little things sometimes that count a great deal in your practice. And I think if you men will take the trouble to look for those things you will save your patients many hours of suffering. You can very easily find whether that Stenson's duct is closed by opening the mouth, holding one finger there, and then at the parotid gland, look to see whether a drop of saliva comes or not, and if not you may make your first diagnosis and then confirm it by an X-ray diagnosis. I thank you. (Applause.)

Dr. J. H. Hughes, Roxboro:

Mr. President, I don't wish to take up your time with any repetition on the subject of the radiogram, I simply wish to comment upon the work that has been given us by Dr. Holliday, who certainly shows a knowledge of his subject, gained from study and experience. But Dr. Robey touched on one point that I don't think he carried the point where it will be clear to you.

Pardon this personal reference, because I can only illustrate that point by personal reference. He spoke of the dermatitis: Several years ago, before our meeting in Charlotte, for three months I suffered from dermatitis. Having used the novocain, like you mentioned, and also the X-ray solutions, every time

it would develop we couldn't find out which one was causing it, as either one was supposed to be able to cause that particular trouble. But the day before I came to the Charlotte meeting, the X-ray solution was being made up fresh, and some of the crystals were on the side of the developer that had been used in making it up, so I simply raked it in with my hands. And the next morning those fingers were standing out, distended, from the effects of the X-ray solutions; and doctor, you said to put the X-ray aside, but that is coming directly from your X-ray solutions. Now I don't touch the solutions at all, even in handling the films I have my assistant hold the clips in which the films are used for the first examination, and I catch hold of the wrist without touching the clips or the films which have been in the solution, although they have been washed in the running water.

So, if you begin to find that the fingers are becoming slightly distended, and the surface of the skin glazed, and after a few days begin to peel off, that is coming from your X-ray solutions. So it is not so necessary to keep away from the X-ray, but keep away from those solutions and you will find you will get relief. Because from that time on, I never have had any trouble except when I touch those films and the next day I can see it on the skin of the fingers.

Dr. Holliday's paper is one that is very complete, and as I said just a few minutes ago, it is based on his knowledge of the subject and it cannot be discussed only to commend. (Applause.)

President Jones:

Gentlemen, I know there are numbers here that would like to discuss that paper and it is certainly worthy of a broad discussion, but we are running a little behind time now, and unless there is some other urgent discussion I am going to ask Dr. Holliday to close it at this time.

Dr. Houghton Holliday:

Gentlemen, it's very evident that we all agree on the subject. I appreciate the kindness of the doctors who have discussed the paper, and I think that we agree, absolutely.

Not in the way that was evident after a meeting that we staged over in China one time to spread a little propaganda among the Chinese in connection with the Rockefeller Foundation, in an effort to bring out some points in regard to preventive medicine and putting it across to the Chinese. And inci-

dentially we thought we would invite some of the prominent Chinese scholars in to attend this meeting in the hopes that some of the information which was passed out would permeate and sometimes do some good. We had these meetings and we had doctors from different parts of the world discussing the results of typhoid and other preventive diseases, and we thought we were putting across a mighty fine program.

But, at the end of one of the meetings we called upon one of the prominent Chinese to speak, and they are usually quite willing to speak, and he got up and he said he appreciated very much being invited to these meetings, that he had often wondered how America and the other countries managed, he knew that they had to resort to some sort of artifice as a means of keeping up the population, but of course it did not apply to China because China had already arrived as it were! (Much laughter:)

President Jones:

I would like to ask Dr. Clayton to present the next essayist on the program.

Dr. W. F. Clayton, High Point:

Mr. President, Ladies and Gentlemen, I am sure that you all agree with me when I make the statement that for a good many years we have longed for the time when we could enjoy a closer coöperation between the dentist and medical societies. I am sure that we are all happy to know that we have with us tonight a delegate from the North Carolina Medical Society, and I take great pleasure in introducing to you, Dr. Kenneth B. Geddie, of High Point, who will discuss the subject of Dental Caries and Diet. (Applause.)

Dr. Kenneth B. Geddie, High Point:

Mr. President, and members of the Dental Society:
. . . . Dr. Geddie presented his prepared paper:

DENTAL CARIES AND DIET

KENNETH B. GEDDIE, M.D.

When the President of our State Medical Society appointed me to meet with you as a representative of the Physicians of the State of North Carolina, I accepted with a profound sense of my own inadequacy. I realize fully the honor bestowed upon me, and I appreciate the privilege of appearing before you.

For thousands of years man has been afflicted with tooth decay. Paleopathologic studies bear evidence to its prevalence among the earliest races. What we know about Dental caries has slowly accumulated over a period of nearly 2,000 years. It is to be expected that during such a period of time sound as well as unusual ideas should be advanced. The interpretation of dental caries provides a variety of opinions from many sources, from the dentist, the embryologist, the biologist, the physiologist, the chemist, the internist, and from the practicing physician. It is only by the combined efforts of this heterogeneous group of investigators that we have arrived at even an approximate solution of this age-old problem. Within recent years the etiology of dental caries has been the subject of almost numberless experimental and clinical investigations. The results so far obtained, while not uniformly gratifying, at least show some progress in the prevention and cure and leaves something yet to be desired as to the etiological factors involved. Within the past twenty years probably more progress has been made than in the previous 2,000. Even now there is no unanimity of opinion as to the exact etiology, but the fact that so many recent investigators have agreed that an adequate diet will largely control this prevalent disease stands out as a beacon light in its prevention and cure.

In the consideration of the problem of dental caries there are certain facts which have thus far been ascertained and are now more or less generally accepted as true. According to Bunting *et al.* these are: (1) Dental caries is a destruction of the hard substance of the tooth by a process, the initial stage of which is decalcification by acids. (2) The acids active in caries are not generally distributed in the saliva, but are localized and concentrated on certain areas of the tooth surfaces. (3) Carious lesions occur most frequently in the pits and fissures of the occlusal surfaces and on certain areas of the approximal, buccal and lingual surfaces of the teeth, at which locations there are opportunities for stagnation and the retention of foreign matter. They do not occur on smooth enamel surfaces that are frequently cleansed. (4) All initial lesions of caries contain acid-forming bacteria capable of producing and living in acids of sufficient potential to decalcify the enamel. (5) The hardness or softness of the teeth may affect the rate of progress and extent of caries, but does not alone determine its occurrence. Caries, as a rule, runs a more rapid and extensive course in hypoplastic teeth than in hard and well formed varieties, but instances commonly occur in which the poorest formed teeth are wholly free from the disease. (6) Malhygiene of the mouth frequently favors the inception of dental caries and increases its activity, but alone does not determine its occurrence. Mouths that are habitually unclean are often wholly free from caries and conversely, mouths that are scrupulously clean may be seriously affected by the disease. (7) The process of dental caries is related to and often determined by certain constitutional states and conditions of bodily health. The nature of these general influences and the manner in which they affect the course of this dental disease are not clearly understood at this time. The following bodily conditions are perhaps best known as systemic factors which either favor or oppose dental caries: Heredity—There are

strong evidences that the tendency toward dental caries or toward an immunity to the disease may be transmitted from parent to child. Age—Susceptibility to dental caries is clearly influenced by age. Incidence of the disease is known to be highest during the ages from 7 to 20 years of age; the tendency to caries is markedly decreased. Health—It is frequently noted that severe onsets of dental caries follow attacks of general disease and disturbances of bodily health. During pregnancy caries may be unusually active. Children who are undernourished or who are suffering from general debility are usually especially prone to dental caries. Racial Influences—Dental caries is more prevalent in certain races than in others. The natives of Africa, South America and the South Sea Islands, the Esquimaux and many other primitive peoples are notably free from the disease, while those who live in the more civilized lands are extremely susceptible to it. There are evidences that the disease often increases in prevalence as people advance in the scale of civilization. It is also observed that when persons migrate from a caries-free nation to a country in which it is prevalent, they and their progeny may later develop dental disease. There is no indication that dental caries is an endemic disorder or that it is induced by any climatic conditions. Diet is the only constant variable between immune and susceptible races which thus far has been recognized.

With the idea constantly in mind that the above are generally accepted as facts let us consider the more recent theories concerning dental caries and briefly review some of the investigations favoring each. At first glance it seems barely possible to correlate the various observations under general headings but closer study reveals that they may in general be grouped under two broad divisions: (1) Dental caries is produced by a specific infection. (2) Dental caries is a local manifestation of a general metabolic disturbance. It remains to be seen whether these two apparently widely divergent views can be correlated and coalesced so as to form one new concept as to the origin of dental caries.

Many bacteria have been accused of being the specific cause of tooth decay. Miller did not believe that any one micro-organism was responsible for dental caries. Bunting and his associates at Ann Arbor have presented much evidence to show that dental caries is an infective disease and that *bacillus acidophilus* is the specific etiologic agent. They have found that this organism does not inhabit the mouth of all people, and in those which it is found there may be periods in the life of the individual when it disappears. Up to 8 years of age it was present in about 35% of children examined, from 8 to 20 years, 85% to 95% were affected and after 20 years about 50% showed its occurrence. The fact that the chronologic appearance of the organism corresponds closely to the periods of greatest caries activity in the average individual would seem to have some significance. They demonstrated that certain antiseptics such as metaphen and hexylresorcinol change the bacterial flora of the mouth so that *bacillus acidophilus* almost or quite disappears. They reported some time ago that the best dental conditions and the lowest evidence of *bacillus acidophilus* occurred in a group of children who, for a number of years, had been fed on a well

balanced diet from which sugar had largely been eliminated. They conducted a comprehensive experiment on several rather large groups of children in several orphanages and in a public school. In this experiment certain dietary and therapeutic measures were carried out over a period of one year and the activity of dental caries noted. The diet was a varied ration fortified by the inclusion of one quart of milk and some green vegetables and fruit for each child daily. No cod liver oil or viosterol was given. These children had no sugar in their cereals or in their beverages, very little sweetened preserves and pastry, and little or no candy. Unfortunately they do not state how much green vegetables or what kinds of fruit given. In addition to dietary control, hexylresorcinol (S. T. 37), was used daily as a mouth wash. One group did not use hexylresorcinol and two groups had no dietary control. In the group with dietary control plus hexylresorcinol and without the use of hexylresorcinol as a mouth wash active caries was practically eliminated. In the group without dietary control with or without hexylresorcinol, active caries was rampant. The point of most practical significance in this investigation, it seems to me, is not that bacillus acidophilus occurred in the mouth of those affected with dental caries but is the demonstrated fact that a diet containing an adequate supply of milk, vegetables, fresh fruit, and restricted in carbohydrates in some way accomplishes the prevention of carious lesions in the teeth of these children.

Jay and Esser summarize their experiments with the statement that in the examination of 222 cases, bacillus acidophilus was recovered in all but six months showing dental caries and they consider that this further substantiates the concept that this organism is of primary importance in the etiology of dental caries. In their cases metaphen and hexylresorcinol was not effective in causing bacillus acidophilus to disappear from the oral flora.

That dental caries can be arrested and prevented if the patient will eat the proper food seems to have been fairly definitely proved by Mellanby, Boyd, Drain and Nelson, Bunting, Hadley, Jay and Hard, Hanke, and Hawkins.

M. Mellanby presents much experimental evidence to show that vitamin D is the essential factor in the cure and prevention of experimental caries in dogs. In collaboration with Pattison she observed groups of tuberculous children in an institution who were placed on diets which differed, in what she calls, their calcifying qualities. In group A the diet consisted of much extra vitamins (cod liver oil, eggs, etc.). In group B was included the least fat-soluble vitamins. In group D, irradiated ergosterol (vitamin D) was added. After 8 months on these diets the teeth were again checked as regards the spread, initiation, and condition of caries. Groups D, A, C, B, showed best results in order named. In other words the groups of children who had included in their diets the largest amounts of vitamin D showed the most satisfactory results as regards the initiation, spread and cure of dental caries. Since the amount of vitamin D seemed to be the only markedly varying factor, it would seem, as indeed they concluded it to be, that is the most important calcifying factor. But since in no group was there

complete cessation of carious activity and since these diets were rather poor in vitamin C this may have been the factor lacking to make their results more nearly perfect. To oatmeal she contributes a marked ability to inhibit calcification.

Howe, Zilva and Wells demonstrated that diets deficient in vitamin C will produce caries in monkeys and guinea pigs. Hanke recently called our attention to a deficiency of this factor in human diets and presents a series of cases to prove this point. He takes exception to the statement that vitamin D is the all-important essential in the prevention of caries and incriminates vitamin C. In the group of 47 patients with carious teeth not one was eating a perfect diet and not one was eating a diet deficient only in vitamin D; but 27 were eating diets that contained plenty of vitamin D and were deficient only in vitamin C. From this it is clear, he says, that people may have carious teeth even though they are ingesting an adequate amount of vitamin D. And he noted especially that this entire group was eating a diet that was deficient in vitamin C.

Hawkins, in an extensive survey covering the subjects of heredity, habits, malposition of the teeth, and diet on immune and carious individuals, demonstrated a strong correlation only between diet and caries. Those patients who were immune to decay besides being fair consumers of the acid foods in the form of meat, fish, and eggs, were liberal users of the alkaline, high calcium, and vitamin D foods. They used small quantities of cereal or grain foods. The diets of those showing caries were more or less the reverse of the immune. He demonstrated that the composition of the saliva reflected the character of the food fed. The saliva of the immune to decay either had a high alkalinity or high calcium content and usually both. While the saliva of those with extreme decay showed considerable acidity and a low calcium content. This is in contrast to the studies of Roskin who found that there was no consistent difference in the reaction of the saliva with arrest of caries as compared with those in whom caries was actually progressing. Hawkins concludes this report with the statement that dental decay is the molecular disintegration of the hard substance of the tooth by unneutralized acids of fermentation due to a lack of basic or acid neutralizing salts in the saliva. It seems to me that the most significant point in this paper is that a diet containing a fair amount of meat, fish and liberal amounts of alkaline, high calcium and vitamin D food will prevent caries.

Now let us review briefly probably the most practical, comprehensive, and most conclusive series of observations yet advanced in support of the dietary theory of dental caries, viz.: those done by Boyd, Drain and Nelson at the State University of Iowa under the supervision and direction of Dr. P. C. Jeans. These observations were begun during my period of residence there some years ago. It was my privilege to personally see many of the patients referred to in this report.

This report was prompted by observations made by the dental division of the clinic. Routine examinations revealed arrested caries in numerous instances. Teeth containing large cavities, which ordinarily would have an area of softened dentine surrounding the zone

of destruction, were found instead to be quite dense. Indeed it was an astounding thing to strike the bottom of a large dark apparently carious cavity and hear the resounding click of metal against something almost equally hard. In those mouths in which there was evidence of extensive involvement of many teeth subsequent examinations showed this process to have been checked. Salivary calculus deposits on these teeth were almost universal. A check up of the histories of these patients showed that they were all diabetic children who had been on the usual diabetic diet plus insulin for two months or longer. This diet is designed to meet all the requirements of a normal child for growth, activity, and health. It is so designed that fat, instead of carbohydrates, is used as the chief source of energy. All these children were on the same ratio of protein: carbohydrates: fat: namely, 7: 9: 21. In general the foodstuffs consisted to a large extent of milk, cream, butter, eggs, meat, cod liver oil, bulky vegetables, and fruits. Each child received calories for full activity. The menus furnished the essentials of a complete diet so far as is now known. An abundance of dairy products, fruits and vegetables, supplemented with cod liver oil, insured a considerable supply of mineral salts and vitamins. The ash of this diet was predominately basic. This, they state, together with an adequate and balanced ration, is the essential difference between the diet of these children with arrested caries and that of the child whose caries is progressive. The intake of such a diet resulted in the arrest of caries in a group of twenty-eight diabetic children, 82% of whom had shown definitely progressive caries prior to the establishment of the dietary control. They thought at that time that it was not the diabetes, not the insulin, not the high fat diet but was rather the well balanced diet that was responsible for the results. To make this point clear they took another group of children all of whom had several carious teeth. These were non-diabetic children in orthopedic ward and were being offered a well balanced diet similar to the diabetic group. During this experimental period each meal was supervised to see that all of the diet was taken. In each case caries was arrested. Two of these children were followed for several months after they were allowed to resume the regular hospital diets without supervision. In each case they were found to have active caries and one had three new cavities. The diets were adequate to prevent and arrest caries but the children when allowed to choose from the well balanced diet offered, chose not to eat some of the essentials of an anti-carious diet.

The next study was made to determine whether arrest of caries could be obtained in the home under regimen which approximates that of a normal child. A group of pre-school children with active caries was chosen. The problem was explained to the parents and co-operation of several was obtained. They were taught to select a diet which would insure the intake of the known essential minerals and vitamins in considerable amounts. They were given a sheet of instructions which specified that each child should receive daily a quart of milk, one egg, a teaspoonful of cod liver oil, one ounce of butter, one orange, two or more servings of succulent vegetables and of fruits and such other foods as the child desired. Five children

followed this regimen until the caries was completely arrested. In no case did this require longer than ten weeks.

The fourth group of children consisted of four girls afflicted with celiac disease, a condition in which the tendency to dental caries is notorious. In this condition, the ability to absorb fat and starch is impaired, necessitating the use of simple sugars and protein as sources of nutrition. The two older children had extensive caries when first seen. The younger ones, 25 and 31 months old, had not yet developed caries. These four children have been under observation for more than 4 years and during this time have been under dietary management as outlined above for the control of the celiac condition. The two younger children have not developed caries and the caries of the two older have become arrested and remained so. In concluding, they state, that correlation of the diets of these four groups show that they differ widely but were equally effective in arresting caries. In one, calories were supplied principally as simple sugars, and fats were avoided as much as possible; in another, fats furnished most of the energy, and only enough carbohydrates were used to make the diet antiketogenic. Each child however did receive cod liver oil, orange or tomato juice, milk, vegetables and fruits daily, in amounts designed to meet the requirements for vitamins and minerals. The protein allowance in every instance was at least a gram per pound of body weight. Oral hygiene played no part if an adequate diet was supplied.

After carefully reviewing these and many other articles on dental caries, I can arrive at only one conclusion and that is tooth decay is dependent primarily on metabolic changes. I question not the honesty or the accuracy of any of the investigators concerned but I do believe that, nearly all of the apparently diametrically opposed views can be made to fit this one concept as the etiology of dental caries. I think it has been conclusively proved both by experimental and clinical observations that active caries is indicative of nutritional deficiencies. It has been equally definitely proved that caries can be prevented and arrested by a diet designed to give adequate protein and calories and which includes daily a quart of milk, one egg, one teaspoonful of cod liver oil, one ounce of butter, one orange, two or more servings of succulent vegetables and of fruits, and such other foods as the child may desire. This diet is one which every child should have not because it will arrest caries, but because it is complete. Even more unnecessary than a special diet for caries are the various mineral preparations, proprietary and otherwise, which have been advocated for this purpose. When 80 to 90% of our population has a disorder dependent upon a faulty diet, our conception of a good diet needs modification. No doubt bacteria and their growth products play a definite rôle in the production of dental caries, but this factor apparently is of no importance when the teeth are kept hard by means of a good dietary regime. No valid evidence exists that poor teeth are inherited.

The frequently observed family predisposition is no doubt due to faulty food habits. Even the most poorly formed teeth will not decay if the diet is good at all times. To us, as practicing physicians and dentists, these conclusions might be of inestimable importance if it

would lead to a closer coöperation between us in the management of any case of extensive caries and particularly is this most important in the management of this disease in children.

(Much applause.)

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President Jones:

We are certainly indebted to Dr. Geddie for his splendid paper and message which he has brought us.

And, owing to the lateness of the hour, we will have to limit the discussion to three minutes. So I will now, with Dr. Geddie's permission, open the paper for discussion.

Dr. G. C. Hull, Charlotte:

I would like to ask the doctor a couple of questions: If in his investigations has he ever taken into consideration the condition of the patient's blood; did he ever think about having the hemoglobin, the calcium content, and the other substances in that blood checked against a normal blood in a child whose

mouth was free from caries and compared to the child whose mouth was full of dental caries? Has that ever been done? I fail to get it in his paper.

Dr. W. D. Gibbs, Charlotte:

Mr. President, I just want to say a few words. I enjoyed Dr. Geddie's paper so much. I think the points he brought out are remarkable for several reasons. It is a pleasure to hear a medical man, because we so much desire his coöperation, and I want to thank him. And I think the same applies to all those things, the same as other theories that have come up from time to time, there is some good in all of them. And I would like to say that sometimes maybe we go a little too rapidly in so many instances. But I think that this matter of diet is a wonderful thing and I think we are on the right track there. I don't think it's the whole thing, at all, but it is certainly one of the biggest developments that has been discovered in the practice of dentistry.

I want to illustrate one personal case, if you will pardon me for it is all I have to say. Some seven or eight weeks ago I had a patient who came to me with very loose teeth, and she was sent to me as a case of pyorrhea; but upon examination I found no symptoms of pyorrhea other than the fact that the teeth were loose and had been loose for a period of more than a year, perhaps eighteen months, and being progressively so. Going into it from every angle, I want to bring out these two factors from the standpoint of diet: That within five weeks after having the patient on a corrected diet, and particularly adding lime, in lime water, those teeth became absolutely immovable from your fingers.

Now, the other phase of the case is this: That there was for the first time, according to the patient in the history of her life, a great deal of deposit of tartar around the teeth. Now, just what would cause that? I just wanted to bring that out, the two facts. And I want to say that I enjoyed very much Dr. Geddie's paper. (Applause.)

Dr. W. M. Robey, Charlotte:

Mr. President, about 1883, Dr. Miller started his theory as to tooth decay, and we have carried that on down to the present day, and we certainly have given it an awfully good trial; and in all the discussions, including Bunting, Howe, Dr. Jay, and Mellanby, and all of them, every one, come back to the question

of diet. We have demonstrated that by a sufficient calcium supply and taking care of that other part of it, that the result was gratifying, but there is something missing, and that at the present time, the thing that we have hold of and the conclusion that they all have reached now is, adequate diet, with a cutting out of starches and sugars. And adding to make an adequate diet, fresh fruits, fresh vegetables, a pint of orange juice.

Dr. Percy Howe says that it's dangerous to tamper with viosterol, that we don't just know what the calcification is, the extent of calcification that will take place—we know so little about it. But we are perfectly safe with the fresh vegetables and orange juice, the balanced diet with these other things. The conclusion to my mind that Howe reaches is that this is about the safest point that we can come to at the present time. And I am certainly inclined very much to it, to that part of it, in addition to our old chemical theory that we have carried on all these years. (Applause.)

President Jones:

Before entering into the close of this discussion, I would like to recognize Dr. Flagge, who is a delegate from the Medical Society. (Applause.)

Dr. Phillip W. Flagge, High Point:

Mr. President, Gentlemen of the Dental Society, I feel greatly honored to be sent as a delegate from our State Society to your body this evening. I feel that it is indeed a pity that the two professions do not get closer together. I believe of the two professions, we as medical men are inclined to be the greater sinners, because I believe that when we leave your profession out of our program that we lose more than when you leave us out of yours. However, time will change things and I hope the time will come when each of these Societies will find appropriate place for both professions on the program.

I thank you for the chance to be with you this evening. (Applause.)

President Jones:

After Dr. Geddie closes his discussion on this paper, we are going to have a paper by Dr. Jarrett, from Charlotte. His paper is more or less introductory to his clinic tomorrow, and we hope that you all will give him a good hearing at this time.

Now I will ask Dr. Geddie to close this discussion.

Dr. Kenneth B. Geddie:

In answer to the first question, asked by the gentleman over here, as to whether any work had been done on the hemoglobin, the calcium and other contents; I can answer that "yes." These children that I mentioned, the work was done in wards for periods of from one to four weeks, during which time their entire calcium intake and output was measured, and there were several determinations during that time of blood calcium and phosphorus and there was no essential differences in the calcium and phosphorus in children with active caries and those in whom caries had been arrested. There was no material difference in the hemoglobin or of the red and white blood cells in the children with active caries and those in whom the caries had been arrested.

Dr. Robey is perfectly right; we are not discarding the old idea of fermentation theory of Miller, and there are many factors that are not understood. But most every clinic or most every group or most every individual that is writing on the subject now, rely primarily on the diet as the one known cause of dental caries.

I thank you most heartily. (Much applause.)

President Jones:

I will now ask Dr. Jarrett to present his paper.

Dr. Ralph Jarrett, Charlotte:

Gentlemen, in presenting this paper I am somewhat embarrassed. All the talks that I have heard principally dwell on the idea that we are going to stop all cavities before they get there. My idea is to fill them after they get there.

. . . Dr. Jarrett read his prepared paper:

DESIGNING AND CONSTRUCTING CAST BRIDGE. ABUTMENTS AND INLAYS

In presenting this subject I wish to say that I claim nothing original, for in going over past dental literature I find everything that I will mention has been discussed, used, rediscussed, partly used and partly cast aside.

What I'm about to present is a collection of simple ideas assimilated into a system that gives me gratifying results in my practice. It matters not so much whose technique it is but the results it gives in the hands of all us dentists. No technique is good if but one man can use it, because no one man can serve all the people.

In reading and studying all the past articles I could find on this subject I become very much confused, because most all of the arti-

cles seemed conflicting with each others ideas, so I decided I would do some thinking for myself and hunt out the best of all and see what results I obtained. To my great surprise, I believe, the entire trouble was that each man made the mistake of being too complicated in technique description, making it impossible for us ordinary fellows to understand and follow out the procedure of technique.

Did you ever attend a convention and see and hear a good clinician talk and work and then go home and ruin several simple inlays? and possibly several good teeth? Why did you do this? Because the techniques were too elaborate and complicated. You bought a hundred dollars worth of stuff you couldn't use and then became disgusted, went back to your old methods and became satisfied with the idea that inlays just needed a lot of surface trimming to make them fit.

Simplicity of technique is just the same as simplicity of life, nothing sweeter because they both bring good results and contentment of mind. My endeavor is to give you a few simple inexpensive basic facts that governs successful cast inlays and crowns, which when followed will give you long-lasting inlays and crowns in the shortest possible time. (That is I find this to be true in my hands.)

They are as follows:

- (1) Proper tooth selection.
- (2) Proper cavity preparation.
- (3) Proper wax manipulation, adaptation and fixation.
- (4) Proper investing.
- (5) Proper burning out and casting.

TOOTH SELECTION

Proper tooth selection is of great importance, because it is upon this that rests the permanency of your restoration, not only of cast fillings but of amalgam, porcelain, and cement fillings.

This idea I have never heard discussed and hope especially, you older men will feel free to discuss, because I have only been in dentistry such a short period that I may be wrong and mislead some men. It takes time to show us our mistakes. Some see theirs earlier than others, but as a whole we are the same.

Teeth must be classified and the proper restoration must be used to gain the best results. We have long, short, wide, narrow, thin, thick, concave and convex teeth and you must consider this factor in selecting the type of restoration you are going to use, as it is here that your strength and permanence of restoration lies. This is more essential in bridge abutments than in separate tooth restoration, but I believe if studied the idea will be good in all restoration work.

The long, narrow, wide and big molars and bicuspids should seldom if ever carry a crown or $\frac{3}{4}$ crown, for three reasons. First you can obtain as much strength from M.O.D., M.O. or D.O. as you need at any time. Second, less time required and less tooth destruction. Third, less susceptible to decay at the gingival margin and less irritating to soft tissues. The short and small bicuspids and molars should as a rule carry crowns or $\frac{3}{4}$ crowns (especially in

bridge work). The anterior teeth should always carry hoods in bridge work, and I believe are much better than inlays in every case.

Now the principal difference in anterior teeth is that of the lingual surfaces. They are flat, convex and concave. Of course they are long, short, wide and narrow, but this makes little difference. The point I wish to stress is that there are three types of hood anchorage, the pin type, the staple type and the pin-staple type. You should know which type of preparation to use when you look at a tooth, because herein lies the secret of success. (I will say right here that I have never seen an anterior tooth where you should show gold to get strength.) As a rule the staple anchorage is used on the long narrow convex tooth. The pin anchorage on the short flat concave tooth. The staple-pin anchorage I use when in doubt of the staple retention. Personally I use the staple hood on the cuspid more frequently than any other tooth.

This I think covers the field of tooth selection, or I might say covers the selection of the proper restoration for the proper tooth.

Common sense must be used and a little experience will bring the above thought, vividly out.

CAVITY PREPARATION

Cavity preparation to the dentist is what the foundation is to the builder of buildings and dams, and to my mind is the primary factor in making well fitting inlays and crowns. (I know this has caused many hours of useless inlay surgery in my office.)

I do not mean to bore you with the rudiments of cavity preparation, but I wish to stress a few very important facts that helps more than anything else to obtain well fitting inlays and crowns, also preserves your time and energy which to me is a very important economical phase of any man's practice.

The first requirement of a well prepared cavity is that all walls and margins must be accessible to the eye, free from undercuts, so prepared that wax will flow to every wall and margin under pressure without difficulty, and for permanency's sake the margin must be carried to what is known as the self-cleansing or immunity areas and so prepared that future dislodgment of filling during mastication is practically impossible.

Dr. Black gave us the basic principles of cavity preparation many years ago, and to refresh your mind I will name them briefly:

Outline form, resistance form, convenience form, removal of decay and retention form.

These are all essential for good cavity preparation, but in my search and review of past dental literature, I doubt seriously if Dr. Black knew anything about cavity preparation for the inlay. He advocated the box-shape preparations for fillings, but I believe he was speaking only of gold foil, alloy, and plastic fillings. This is where I differ with Dr. Black and all other advocates of the box preparations for cast restorations and believe I can prove my theories in actual practice. I feel a hesitancy to say so out of my reverence for Dr. Black, but I believe herein lies one of the biggest causes for the failure of so many inlays.

The strictly speaking box preparation as outlined by Dr. Black, in my hands, will not allow the success that I gain from the slice, semi-slice, Alexander or what I call the flaring wall cavity preparation. This is due, I believe to the fact of too many sharp right angles and the difficulty of getting the wax well adapted to the cavity walls from lack of accessibility.

I find it very difficult to describe cavity preparation by words alone so that the listeners' minds can grasp the details, but will mention the essentials and later show you by models, so that you might see the simplicity of it.

There are two theoretically speaking types of cavity preparations, namely the box and slice preparations and their modified types.

The preparations which I will try to describe is somewhat of a combination of the two, and I call it for convenience sake the flaring wall preparation. This is similar to the preparations used by Dr. Charles Alexander, the inventor of the gold inlay, $\frac{3}{4}$ crown, and hood restoration and has been in use probably since 1890 by Dr. Alexander of Charlotte, N. C.

I find this preparation to be the simplest, quickest, and easiest to prepare and that for cast restorations, it is the only preparation that gives me consistent and successful fitting inlays.

Before I attempt to describe cavity preparation, I will call your attention to the fact that you should visualize the finished cavity preparation before you begin the operation. This is outline form, by this I mean you should know what you will have before you begin. This cuts out lost motion and saves time. Knowing what you are going to do and then do it without waste of time. Herein lies the secret of quick as well as thorough tooth preparation.

I wish to explain what I mean by the flaring wall preparation, so that you may understand what I mean by this terminology and the advantages of it over the other preparations.

By flaring walls, I mean that all walls of the cavity should diverge outwardly from the pulpal and floor walls. This means gingival wall as well as side walls. In preparing cavities thusly you do several things which I deem very essential for successful castings. They are as follows:

(1) This gives access to cavity, removes undercuts, and makes wax insertion and removal easy.

(2) It gives lateral expansion of wax pattern, which I think helps more than any other factor to control the expansion and contraction of wax and gold.

(3) It eliminates the short enamel rods as you cut at all points, not across but parallel with the enamel rods, which is of great importance in the longevity of all fillings. (To me, this factor alone confirms my belief that the inlay is the super-dental restoration.)

(4) It brings the cavity margins into areas of immunity.

(5) It saves the time of further beveling of the cavo surface, angles or margins.

(6) It lessens the chance of redcay as you have long enamel rods, which are less susceptible to decay, as a marginal foundation for the casting to rest upon.

In the past we have been taught that the pulpal wall, floor wall, and gingival wall of cavity should meet at right angles. I don't agree with this theory, because, I personally cannot get good castings, as a rule, casting against sharp angles. Something happens here that I can't explain, but when I round these angles, my castings are satisfactory.

I believe the floor walls should be flat as a rule in most cavities, but am sure the pulpal walls should incline toward the center of the tooth. This gives accessibility for the gingival preparation, and makes easier the gingival adaptation of wax.

We must at all times consider retention form in cavity preparation.

There are two types of rententive forms of cavity preparation and I wish to call your attention briefly to both.

First, Depth Rentention.—This may be in the form of pin, staple, groove, doll-head, or box, but in either case it means carrying the retention well into the dentine.

Second, Lateral Expansion Retention.—By this I mean that the margin of the cavity will extend out far enough so that when the filling is placed under stress of mastication, the act will have a tendency to seat the filling more closely to the marginal walls instead of dislodge or rock the restoration.

I can explain this more clearly by using for example the circus tent. The main poles of a circus tent do not set deep into the ground, but instead rest upon a block or near the surface of the earth. They serve mainly for height and the tent is held up by the lateral ropes, which run to stobs around the edge of the tent from the top of main tent poles. So you see it is just as essential to carry the margin of your cavity out as far as possible without too much tooth destruction for retention sake as it is to go deep. The careful combination of both is essential.

I will just briefly consider the proximo-occlusal cavities, which are the simplest and most often used. The M.O. and D.O. are the same in preparation and are different only in short and long teeth. It is not always necessary to carry the preparation over the entire occlusal surface, but in small short teeth I deem it very essential as lateral expansion of cavity preparation is just as important a factor here in retention as depth of cavity preparation.

The M.O.D. preparation on the posterior teeth is more or less simple, due to the fact that I depend on the staple or groove for depth retention, and carry the margins of my cavity over the entire occlusal surface hollowing out the mesial and distal surfaces to look somewhat saucer or disc shaped. I sink a small fissure burr well into the dentine both mesially and distally paralleling the long axis of the tooth, then bringing same groove across occlusal surface joining the distal and mesial grooves. This restoration when first brought out was called by Dr. Alexander, the Saddle Crown. This brings us to the $\frac{3}{4}$ crown preparation.

Now here is where I fail to agree with Dr. Maives Tinker Knapp and several other leaders in this field. They all claim you should have your retention paralleling the long axis of the crown of the tooth, especially in the bicuspid and anterior teeth. I disagree on

that point and make the statement that the retention grooves should always parallel the long axis of the tooth, providing of course the tooth sets normally in position. I prepare the $\frac{3}{4}$ preparation similar to the M.O.D., except removing the lingual surface using the staple for additional retention, finishing the gingival to a feather edge or rounding shoulder instead of a square shoulder.

For the hood or anterior $\frac{3}{4}$ crown I use the staple pins, and the staple pins preparation for retention, bringing gingival margin to a feather edge instead of a shoulder. I'm not in favor of the square shoulder gingival finish, because very few men can properly make the shoulder preparation and cast successfully to it. Grooves and pins should parallel the long axis of tooth and not the crown.

I will clearly bring these points out on models. The crown is one of our finest restorations and attachments, but is like the amalgam filling, the most abused. I find the preparation for a crown to be the hardest preparation of all and to correctly prepare a tooth for a crown requires considerable time.

I will make this suggestion for its preparation, practically all enamel should be removed, made cone in shape, beveling gingival margins to a feather edge and not to a square shoulder preparation.

WAX MANIPULATION, ADAPTATION, AND FIXATION

You must master the action of the wax you use and learn to take advantage of its peculiarities, which lessens the time consumed in preparing the wax pattern and gives you accurate end results. I won't consume your time discussing waxes and their physical properties because this subject has been discussed before this body many times, far more intelligently than I am able to do, I only wish to explain how I manipulate, adapt and handle the wax I use at the chair day after day and the results I obtain by using it as I do.

I have used Kerr's Blue Inlay Wax for ten years and like it better than all others for three reasons.

It flows or crawls evenly under medium pressure.

It can be burnished against cavity margins without breaking and has scarcely any rebound after having been burnished, and last, it becomes sufficiently hard to handle without distortion.

I will now give you a brief description of how I handle the wax in making the wax pattern.

I pass the wax over the flame a few times, until it is slightly softened and then compress between the fingers, then again slightly warm, and again compressing until I have the wax the proper temperature for the ease of manipulation. I then form the wax to approximate shape of cavity so shaping it that the gingival portion will be readily reached by the wax. I now pass wax through flame and carry it to cavity pressing it firmly to place exerting the pressure so as to place the wax into close adaptation to all the cavity walls and margins. If it be a proximo-occlusal cavity, the proximal tooth will serve as the fourth wall. If the cavity is wide enough bucco-lingually to permit much of the wax to be forced into the buccal and lingual embrasures, the thumb and fore-finger of one

hand may be used to make pressure from buccal and lingual, while pressure is exerted on the occlusal with the finger of the other hand. I now chill the wax with cold water while continuing to hold wax with fingers under pressure. Now with a razor-sharp knife I remove excess occlusal wax, chill again, quickly following behind chilling with hot ball burnisher slightly softening occlusal wax and ask patient to gently close into wax, this serves as a guide from which to carve. Remove by carving until you have excess occlusal wax. Remove, chill wax again, repeat and place double thickness cellophane, over wax which has been previously covered with cocoa butter, and ask patient to close and slide teeth laterally. Chill while teeth are in occlusion. Now remove excess embrasure wax with sharp edge instrument and pass small silk thread by contact points pressing thread firmly against opposing tooth. I now remove pattern from cavity, working gently up and down several times until wax comes freely out. I now trim excess gingival wax with razor blade knife, replace into cavity and burnish the wax from the center toward all the margins. In burnishing the gingival margins be sure you do not disturb contact points. I now chill and remove from cavity and invest.

PROPER INVESTING

As soon as the pattern is removed from the mouth there should be no time lost in getting the wax invested. Attach your sprue (the bigger the better) and be sure to keep wax pattern chilled until it is invested, because as I have said, if you work with a cold wax then keep it cold until invested.

We all know that proper investing is an important step but I have failed to prove by experiment that it is as important as lots of the leaders of our profession tell us. The only thing important that I find is to keep the wax cold and coat wax well with cold investment material making sure there remains no air bubbles.

I use whip mix investment and very cold water and spatulate same with mechanical mixer in rubber bowl until proper mix is obtained, fill ring and then add more dry investment and spatulate for a thicker mix and paint pattern with this, place into ring and allow to set at least seven minutes and not over twenty minutes before starting burning out process.

BURNING OUT PROCESS

I deem this a very important step for successful castings because there are three things that can happen. I name them as follows:

- (1) You can over burn.
- (2) You can under burn.
- (3) You can get the proper burn.

Now what does this have to do with a proper fitting casting? Well I will give you the results obtained from 102 burn outs.

If you over burn you will have a tight fitting usually rough casting. This, I think, is due to the fact that all the wax and carbon

is removed and the investment breaks down or deteriorates to a certain extent and when the gold rushes in the investment gives way to the pressure. Now if you under burn what do you get? You get an oversize casting, or I might say the casting will be loose, most of the time too loose for use. What causes this? I think it is due to the fact that a deposit of carbon is left, which takes up space and therefore gives the loose fit. The proper burn out of course gives the opposite of either without any further explanation.

I wish to emphasize here that the above theories are not what you might call scientific but are my own theories of what happens inside the mold without being able to prove just what does happen. I do know however the above results as to castings are practically true by experimentation of my own crudeness.

As soon as the investment has set sufficiently, place ring into cold furnace and allow to stay until proper burn out appears. This will show up, using whip mix material, with a white outer edge (next to ring) growing gradually gray or brown toward sprue hole. When this appears it's time to cast which should be accomplished as soon as ring is removed from furnace for best results.

I wish to explain a few things here that will help a lot.

If your furnace is hot and you have another casting ready, the investment should set at least twenty-five minutes, because if it hasn't you will have somewhat of an explosion which might ruin the casting. If you are in a hurry you can place the invested wax into a cold furnace, having allowed but ten minutes for the investment setting. This is not advocated but I have obtained good results by this hurry method. Don't put the ten minutes set in a hot furnace, because it will explode.

CASTING

I use a whip mix machine. It is an air machine, but I have a Roach machine and get just about the same results. Personally, I advocate any machine you are used to, because I don't think the casting apparatus has much to do with it. They are made to sell so that the dentist will have somewhere to put his hard earned money.

Casting is simple and I can add nothing more to what you know, but will say that the gold should be clean. The heat should be hot and applied directly on the gold, melting the gold as quickly as possible until it begins to shimmey or shakes like jelly, then cast. Having cast let cool before removing from investment. When cool remove from ring and clean by pickling. I pickle most of my inlays by placing inlay in small copper vessel containing H_2SO_4 and bring to a boil. I do this because I use S.S. White Number one and that is the method they advocate.

GOLD

I have very little to say about gold, because books have been written on this subject and I don't believe they have really cleared up the facts on the metallurgy so that many of we fellows can understand what they are talking about.

I will say that it is best to learn the peculiarities of some good gold and then stick by it. I find it all about the same, but personally, I use S. S. White Number One, Williams XXX, and old scrap gold and bridge. I can obtain the same results with either.

The only precaution necessary is that you must not abuse the gold after it has been cast.

For example:

I can take S. S. White Number One which is their hard inlay gold and make it as soft as S. S. White Number Two, by improper cooling. XXX is a hard gold but it can be made brittle by dropping into cold acid or water, so you see you should study the peculiarities of the gold you use and the makers of the gold you use will gladly supply you with the information.

In closing I wish to say that the procedure outlined is simple to carry out, requiring no outlay of elaborate equipment and has simplified cast restoration work so much for me that I hope the time you have spent listening will not have been a waste.

(Much applause.)

President Jones:

I will ask Dr. McClung to start the discussion on Dr. Jarrett's paper.

Dr. John A. McClung, Winston-Salem:

Mr. President, Members of the North Carolina Dental Society, I have thoroughly enjoyed Dr. Jarrett's paper. I think it's one that is very practical, and it shows from what he says that he gets wonderful results with little layout.

There are one or two things that I would like to take exception to, if he will grant me that privilege. In the beginning I don't believe that he goes quite far enough back and determines the position of his pulp as well as the investing tissue, especially is this true for bridge abutments. I think that is the essential thing to consider in the beginning, rather than the length of the crown, which is very essential of course. But I believe that the investing tissue and the bony supports will determine in the beginning to a great extent what the life of the restoration might be. The length and size of the crowns of those teeth do govern to a great extent the type of attachments to use, particularly in bridge work.

I am not so much in favor of using pin-lay attachments; they are right dangerous unless you are very careful and most exacting as to the position of the pulp. It is a very durable attachment if properly made, particularly if it's used in connection with the legs, the pin-leg, instead of just the pin. Personally I prefer the groove. You gain greater frictional re-

tention, I believe, than with the pins, and you do not endanger the life of that pulp to the extent that you do when pins are used.

With reference to his cavity preparation, I believe he mentioned he does not like to make his walls parallel. And I would like to say that I think it is advisable to have the enamel rods, the short rods all cleared away or taken away and beveled. I think it well to bevel the enamel rods but when you get into the dentin I think a stronger attachment or filling or what not can be made if the walls are as near parallel as possible, and with square angles, Doctor, if you please. It is not nearly so difficult that way.

With reference to what the doctor said, he had a little trouble in making castings that would fit accurately with these square angles. I believe that in my own experience I have concluded that that is governed to a great extent as to how his mould is handled after it has been invested. If it is burned out or overburned and it is spread too much it doesn't infiltrate the investment and you have a breaking down of those square angles. And that may be his trouble, possibly. That is, at least, my own belief.

I will say I thoroughly enjoyed your paper, Doctor, and appreciate what you have told us. Thank you very much. (Applause.)

Dr. G. C. Hull, Charlotte:

I would like to say that in all of the dental meetings I have been to, I don't believe I have ever enjoyed a simpler paper and one that I could so readily understand without any technique that was impractical for me. I thoroughly enjoyed Dr. Jarrett's paper.

There was one phase of it particularly I think that should appeal to all of us, except those that are mighty well fixed financially. He gave us no elaborate outlay of equipment to do his work. At the same time it shows that he has certainly studied the histological as well as the anatomical shapes of those teeth, classifying the attachments that he is going to use. I think that Dr. McClung forgets that much depends on the anatomical shape of the tooth. And most any of us that have done inlay work, we remember that after we have run into a couple of pulps. But a long tooth has necessarily a long wall to it, a short tooth has got a short one.

I have never heard a man on cast gold work bring us what Dr. Jarrett did. He has brought us an experiment there, he says over a hundred and two cases done in his laboratory, and his results have been the same over a hundred and two experiments.

We have all had these nice inlays that we have taken pains over and we get them and they don't go in. And what is our trouble? We have guessed. Dr. Jarrett has given us here something concise. And I for myself particularly enjoyed it, and I think Dr. Jarrett certainly should have the thanks of this Society for the labor and the work and the painstaking efforts that he has developed, and yet he has developed it so that we can all do it and do it with a minimum amount of time. And that is the only thing that the dentists have got to sell. He is not in the game to sell materials, because the supply house would run him out of business. I think that is another fine point that Dr. Jarrett didn't stress, but I gathered from your paper, Dr. Jarrett, that you were trying to give us something as a time-saver, as it were, and at the same time something that would be economical and something that would be easily manipulated and allow us to do better work. (Applause.)

President Jones:

Is there any further discussion? If not, before asking Dr. Jarrett to close the discussion, Dr. Crawford, of Norfolk, wants to make an announcement I believe at this time.

Dr. Crawford, Norfolk, Virginia:

Mr. President, Ladies and Gentlemen, North Carolina Dental Society: I have enjoyed being with you very much and seeing a lot of my old friends and classmates. Dr. Jones, I didn't graduate with you, but we went to school together.

I have a message from the President of our Association of Virginia. Dr. Simmons extends an invitation to you one and all to come to the Chamberlin-Vanderbilt Hotel, Old Point Comfort, Virginia next Monday, Tuesday and Wednesday. I hope to see lots of you over there. (Applause.)

President Jones:

I will now ask Dr. Jarrett to close the discussion on his paper.

Dr. Ralph Jarrett, Charlotte:

Mr. President. Dr. McClung believes in the groove retention. My biggest objection to the groove restoration is the average man objects to showing gold, and personally that is a big objection to me. Because, to be just frank, I can get more money for not showing it than I can with showing it, and I can get the same retention and without as much tooth destruction by the pin method. I know I am not basing my opinion on the same basis as Dr. McClung, because I am not a skilled operator, but the average anterior inlay that comes into your office, you have to base your opinion on that and not on a skilled man altogether. Perhaps the men listening in have not been able to grasp that fine point of preparation which is really difficult if you have square shoulders. And I challenge any man in the audience to make a square shoulder upon a posterior or twelve-year upper molar and do it as it should be done unless he spends an hour and a half to two hours. Now, my principal reason for developing this technique, was that I wanted to eliminate a two-hour procedure to make an inlay and do it just as thoroughly, make and set it, and I am speaking of in the chair time, in forty minutes. I can take most any tooth and prepare it as I do, chair time I am speaking of, make and set an M.O.D. inlay in forty-five minutes.

In my opinion it is very objectionable to show the coloring of either the gold or the cement, if you are getting a fair fee for the work. I can make an M.O.D. inlay, one right after another, and make them fit right in the mouth, and I do it, I think, due to the kind of preparation I make.

Personally I can't get by with showing so much gold. You can drop back without even approaching the curve of your cuspid of your tooth and show no gold at all. I believe that this technique will open up a better field in this work. (Much applause.)

President Jones:

Gentlemen, this meeting stands adjourned until tomorrow morning at 8:30 o'clock.

The meeting of the Society then, at 11:00 o'clock p.m., adjourned.

SECOND DAY—TUESDAY, MAY 5, 1931

MIDDAY SESSION

The House of Delegates met at 12:00 o'clock noon.

President Jones:

The House of Delegates will come to order.

I will ask the Secretary to call the roll of the House of Delegates at this time.

PRESENT

Dr. Paul Jones, Dr. Dennis Keel, Dr. L. G. Coble, Dr. N. P. Maddux, Dr. Clyde Minges, Dr. L. M. Edwards, Dr. E. B. Howle, Dr. J. S. Betts, Dr. L. R. Gorham, Dr. A. P. Beam, represented by Dr. Fred Hunt; Dr. N. P. Maddux, represented by Dr. A. D. Abernathy; Dr. R. A. Little, Dr. P. R. Falls, represented by Dr. T. A. Wilkins; Dr. L. R. Thompson, Dr. Fred Hall, Dr. Phin Horton, Dr. G. A. Lazenby, Dr. H. C. Carr, Dr. H. V. Murray, Dr. E. J. Tucker, Dr. J. H. Wheeler, represented by Dr. C. I. Miller; Dr. O. L. Presnell, Dr. J. Martin Fleming, Dr. Vietor E. Bell, represented by Dr. S. L. Bobbitt; Dr. Wallace F. Mustian, Dr. G. Fred Hale, Dr. H. R. Chamblee, Dr. S. L. Bobbitt, Dr. Dewey Boseman, Dr. H. L. Keith, Dr. Horace K. Thompson, Dr. Percy B. Cone, represented by Dr. Powell; Dr. J. E. L. Thomas, Dr. Z. L. Edwards (added after some discussion later on).

President Jones:

Having more than a quorum present, I declare the House of Delegates open for business.

Dr. Z. L. Edwards:

Mr. President, the Secretary did not call my name. I am present, Sir, from the 5th District. I am president of the District and should be on there. I am a member of the House of Delegates.

President:

Being president of the District does not make you a member of the House of Delegates, does it?

Dr. Z. L. Edwards:

It does in the 5th District. We have five delegates.

President Jones:

Without objection I will have the Secretary to record Dr. Edwards as a member of the House of Delegates. Dr. Edwards will be recorded as on the Committee of Ethics.

I again declare the House of Delegates open for business, with more than a quorum present. What is the first matter of business you wish to dispose of?

Dr. J. Martin Fleming, Raleigh:

Mr. President, the resolution that was introduced, following the reading of some letters by Dr. Robey yesterday afternoon, was referred to the Resolutions Committee. The Resolutions Committee had a meeting this morning and invited Dr. Edwards, the author of the letter, to meet with us. After some suggestions, Dr. Edwards has rewritten the resolution, and it comes to you as a resolution from Dr. Edwards, endorsed by the Society. It reads as follows:

Whereas the North Carolina Dental Society, in annual convention assembled, feels that the dentists of this and other states are having to pay exorbitant and unreasonable prices for supplies, equipment and other materials in the practice of dentistry and

Whereas the general trend of prices for all commodities has been downward for the last two years or more and

Whereas we feel that there is no justification for maintaining the high standard of prices for dental supplies of every description. Therefore,

Be it resolved: That the North Carolina Dental Society go on record as strongly opposing the attitude of manufacturers and distributors in connection with the present price situation, that we urge them to make reductions in keeping with the times, and that unless such reductions are made we recommend concerted action by all of the state dental associations in the country.

Be it also resolved: That in the event no voluntary action is taken by the manufacturers and distributors to bring about lower prices that the North Carolina Dental Society, in coöperation with other state societies, make a direct appeal to the Federal Trade Commission for a thorough investigation of existing conditions.

Be it resolved further: That a copy of these resolutions be sent to the Secretary of the American Dental Association and also to the other state associations with a view of enlisting their support and coöperation and that a committee be appointed from the North

Carolina Dental Society for the purpose of working with similar committees that may be appointed by these other associations.

This 5th day of May, 1931, Winston-Salem, North Carolina.

Z. L. EDWARDS.

Approved by Resolutions Committee:

F. L. HUNT,
W. F. BELL,
J. S. SPURGEON,
J. N. JOHNSON,
J. M. FLEMING.

President Jones:

You have heard the resolution, what is the pleasure of the House of Delegates?

Upon motion of Dr. Betts, seconded by Dr. H. L. Keith, the motion was put and carried, that the resolution be adopted.

Dr. J. Martin Fleming:

Mr. President, we further report the following resolutions and recommend their passage:

REPORT OF THE RESOLUTIONS COMMITTEE

The Resolutions Committee, to whom were referred certain resolutions, recommend that the following resolutions be passed:

1st. Resolved: That the North Carolina Dental Society in annual session at Winston-Salem, North Carolina, wishes to join the profession all over the nation in expression of appreciation to Colonel Joseph Samuels for the wonderful gift of the Dental Clinic at the Rhode Island Hospital in Providence, R. I.

2nd. Resolved: That the North Carolina Society looks with growing concern and condemnation on "Trade Journalism" and the teaching propensities of manufacturers in their efforts to advertise their products by means that seem at least unethical to the profession at large.

We feel that a Trade Journal can in no wise compare with the recognized Dental Journals and that too often the literature or the lecture of the manufacturer partakes too much of high powered salesmanship. We feel that this knowledge can best be obtained through the regular channels afforded by the Post Graduate Dental Courses of the reputable Dental College, clinic courses and official meetings of State, District and Local Societies.

J. MARTIN FLEMING, *Chairman.*
F. L. HUNT,
J. N. JOHNSON,
W. F. BELL,
J. S. SPURGEON.

On motion the resolutions were adopted.

President Jones:

Is there any other business at this time? If not, at this time I am going to ask for the Ethics Committee report. I think we had better get all these reports behind us that we can that are ready at this time.

Dr. J. S. Betts, Greensboro:

Mr. President: Your Ethics Committee wishes to make report that while there have been a few minor infractions of our Code of Ethics during the year, these have been adjusted through friendly, yet positive, correspondence; and as a result no one of our members has been cited to appear in person before our Committee. Respectfully submitted, J. S. Betts, L. R. Gorham, A. Pitt Beam, Committee.

I move you, Sir, that the report of your Ethics Committee be adopted.

(This motion was seconded, put, and carried.)

President:

We will now have the report of the Extension Course Committee.

Dr. E. B. Howle, Raleigh:

Mr. President, I would like to make this report for the Chairman, Dr. J. N. Johnson. The Committee has not had any meetings this year, and therefore we have no report to make; and in lieu of the report, I would like to extend the floor to Mr. Gruman, Director of the Extension Department.

Mr. Gruman:

Gentlemen of the House, Mr. President: The University of North Carolina is in this peculiar position of coöperation with your Extension Course Committee of the State Society: I should just like to make it plain here to you, that the University is not inclined to promote or push in any way or impose upon the members of the profession of dentistry of North Carolina in its post graduate course of instruction. However, I think you all will agree that any profession in these days needs to keep abreast of the times and needs to keep informed of the developments that are taking place in that particular profession. And consequently, we, representing the University, are very glad to coöperate with your Committee in furthering the idea of post-graduate instruction, and to

that end wish to say that we would be very glad to have you as a Society or possibly as district societies, take up this question and decide for yourselves whether you wish and desire to continue your professional training and your professional growth by means of the University Extension Course plan.

We have no plan to suggest at this time, but I should like to have it clearly understood that the University is very willing and would be very glad to continue to coöperate with the Extension Course Committee of this State Society, in working out whatever plan you desire for your own advancement along that line.

I think possibly that the district societies might be the best means of determining the demand or interest in this type of work, and if as many as four or five of the districts decide that they desire a course of this kind next year, the University could very profitably continue the work in 1932.

Thank you very much for this opportunity. (Applause.)

President Jones:

Are there any expressions at this time on the remarks of Mr. Gruman?

Dr. W. F. Mustian, Norlina:

Mr. President, I believe the best thing is to refer this matter to the president of each district society in the fall, and let the matter be brought up individually with each district society. And then we could come back to Mr. Gruman or to our President and we would derive some information from that as to what we would do.

I would like to make that as a motion, if that is in order; to refer it to each district society at our next meeting.

Dr. A. D. Abernathy:

Mr. President, I second that motion.

Dr. J. Martin Fleming:

Mr. President, it seems to me that this matter should be left in the hands of the committee that has had charge of it for the last few years, carrying it through to its successful end, rather than have a new committee of widely separated men from each district. I believe that committee that has handled it for several years knows more about the needs than these individual presidents of the district societies. Therefore it

seems to me better to leave it to the old committee, or a new committee that the incoming President may appoint.

Mr. President, I move as an amendment, that the matter be left to the old committee or to a new committee to be appointed by the incoming President.

Dr. Dennis Keel, Greensboro:

Mr. President, for Dr. Fleming's information, I would say the committee will be just as it is now.

Dr. W. F. Mustian:

It wasn't my idea to override the old committee, the idea was to get the expression of the district societies of the State if they desired the extension work for next year.

President Jones:

Do you wish to accept the amendment?

Dr. W. F. Mustain:

Yes sir.

President Jones:

Gentlemen, the question is the adoption of Dr. Mustian's motion; what is the will of the Delegates?

(The motion was put and carried.)

Dr. Clyde Minges, Rocky Mount:

Mr. President, please excuse me for getting up again, but it has just been called to my attention that the United States Postal authorities require that in order to enter our BULLETIN and dental magazine as second-class matter, there has to be a subscription price placed upon it.

I am not intimate with the subject nor is it clear in my mind as to just the intricacies of the matter, and I am going to ask Dr. Hale if he will not say just a few words as to what he knows about the matter.

Dr. G. Fred Hale, Raleigh:

Mr. President, the Postal authorities say that they cannot accept professional magazines carrying advertisements, without it also carries a subscription rate. They will accept professional magazines without advertisements and without a subscription rate as second-class matter.

And what we wanted to know was whether to publish the BULLETIN out of the treasury without advertisements from manufacturers as second-class mail, or whether we want to continue as we are and establish a subscription rate to be printed in the BULLETIN and carry advertisements.

Dr. E. B. Howle, Raleigh:

I move that the matter be deferred until Dr. Hale finds out more about the financial status of our treasury, which he knows better than we do.

(This motion was seconded, put, and carried.)

President Jones:

This matter will be brought up sometime later.

Is there any other committee reports to be made at this time? Any new business anybody wishes to bring up before the meeting of the House of Delegates? Any unfinished business?

If not, the motion to adjourn is in order.

The meeting of the House of Delegates then, at 1:10 o'clock p.m., adjourned.

SECOND DAY—TUESDAY, MAY 5, 1931

AFTERNOON SESSION

CLINIC—2:30 P.M.

*By Dr. Robert H. Ivy, M.D., D.D.S., F.A.C.S.,
Philadelphia, Pa.*

I was expecting this clinic to be held in a smaller clinical room and not so many spectators, but we will do the best we can. I also have made some charts here, but they are too small to show in such a large room, but I have slides which will give the same thing.

This subject may be rather dry, yet I think it is important for the dentist to have the knowledge of the various swellings that may be found in connection with the jaws, because he often is the first one to see and notice such condition in the patient's mouth. And a swelling may be due to a great many different things, requiring different forms of treatment. Some of these things are comparatively unimportant and require

rather trifling treatment, and others have great importance and require very extensive and energetic treatment.

So that it is valuable to the dentist to be able to differentiate to some extent between these various things which may look more or less alike, so that he can either treat early or get the patient early in the hands of some one for proper treatment.

Now, as the basis of all diagnosis and treatment some knowledge of pathology is important, and above everything we ought to have some orderly form of classification of these conditions. And at the beginning I am going to show a slide here, showing a group of growths, some of them tumors which cause swellings in the region of the jaw bones themselves. The first one here is fibroma, which is not very common, but fibroma clinically is not a dangerous tumor. It's what we call clinically a benign tumor; in other words it doesn't form metastasis in other parts of the body, no secondary growth in other parts of the body, and it causes swelling, but it is easily removed without much destruction of the surrounding tissues.

The second is the osteoma, which is the benign tumor of bone, a calcified mass of tissue in connection with the bone.

When we come to the third type, we have a different situation, sarcoma, of which there are many varieties, a typical malignant tumor of the bone, and by malignancy we mean a tumor that is dangerous to the life of the patient, in several ways. First of all, the malignant tumor grows comparatively rapidly, it grows by the cells infiltrating between the cells of the surrounding tissue sending on the prolongations into the surrounding healthy cells. And furthermore, forming metastasis cells or secondary deposits through the blood stream to other parts of the body. These malignant growths always have a metabolic effect on the body at large.

Now remember that when we speak of malignant tumors we always think of elderly people, that is, tumors of more or less cancerous nature. They are more generally a disease of elderly people, but occasionally they are found in younger people, but this sarcoma can occur at any age, it can occur in a young child or in an old person. So the age, in diagnosing of a sarcoma, has no bearing at all on the case.

The fourth group is the benign Giant Cell Tumor, and it has some of the characteristics of a sarcoma, unfortunately, but it is not a sarcoma, it is not malignant in the ordinary sense, it doesn't form metastasis or secondary deposits in other parts

of the body, it is just a local growth, the cells and surrounding tissues are usually more circumscribed and can be removed with a comparatively simple operation without the destruction of the normal healthy tissues. So that it is very unfortunate that the term sarcoma in any giant cell sarcoma has ever been used. That has resulted in great mutilation of patients entirely unnecessarily.

The next group is, or the next two groups have been commonly classified under the term Odontoma, that is a tumor derived from the cells concerned in tooth development. We prefer to call one form of these the dento-cystic tumors, forming cystic swellings, epithelio, the cells are cystic, the cells are epithelio in character, causing expansion in the jaw bones, and are often of diseased dental origin, what we call calcified dental anomalis, growing in an abnormal manner without any particular shape such as found in normal teeth.

Then there is a group of swellings sometimes found in the jaws, which are secondary to growth cells, metastatic. For instance, carcinoma in the breast of a woman, may be carried to other parts of the body and into bordering and other tissues. Sometimes in the long bones, the femur, and occasionally in the mandible. So that we must bear that in mind sometimes in diagnosing of an obscure swelling of the lower jaw, that we should inquire into the history of a woman and find out if she has had an operation, as that might have a very important bearing on the diagnosis of this tumor. Another rare type is a thyroid tumor, a sort of goiter, and this belongs in the miscellaneous group of tumors that cause enlargement of the boney structure but which are not true tumors, which produce chronic swelling of the lower jaw or of either jaw, and inflammation.

(EDITOR'S NOTE—Here Dr. Ivey started on his slides, and on account of not being able to reproduce the illustrations we feel that so much value is lost that printing is not justified.)

CLINIC—3:30 o'CLOCK P.M.

By Dr. Houghton Holliday, D.D.S., New York City.

When approved by your Committee, I suggested that we spend this clinic session in a discussion of every day problems arising in dental X-ray work. In this way there is an opportunity for all to enter into the discussion and through the free informal interchange of ideas we may all profit.

In order to start off this discussion group, I have made out the following questions: First, What can you use to locate impacted teeth or foreign bodies? Second, What precaution is necessary to avoid over exposure of the operator to the X-ray? Third, What care must be observed to avoid over exposure of the patient? Fourth, Should a third party be allowed in the room when X-rays are being taken? Fifth, Are pulpless teeth the only foci of dental origin? Sixth, Why should we pay particular attention to the anatomy of the parts we X-ray? Seventh, What are the advantages in Tank Developing? Eighth, Should we turn X-ray films over to our patients? However we are in no way obligated to adhere to this list, and I trust that there will be many additions to it as we progress. Your Chairman expects to profit from the discussion fully as much as any one.

The first question on my list is: What means do you use to locate impacted teeth or foreign bodies? There are numerous methods used and the relative value of each seems to depend primarily upon the circumstances. Until we have satisfactory third dimension radiograms our measurements must always be in but one plane. In locating a hypodermic needle, broken in making a mandibular injection, it is customary to insert a second needle, X-ray the region with the second needle in place and draw your conclusions as to the position of the broken needle from its position in regard to the second one.

In locating objects along the alveolar ridges, a short pin is quite satisfactory. A pin is cut off, leaving the head and about a quarter inch of pin. The end is sharpened, the pin is sterilized and one or more of them pressed into the tissue in the approximate location of the object sought. A radiogram then shows the position of the object in relation to the pin.

Member:

Did you ever have a patient swallow the pin?

No, I have not had that happen and I do not believe it is likely to happen if the pin is cut short and pressed well into the tissue. Some operators use a staple instead of a pin. Triangulation is used, but this method is of value primarily in locating relatively large objects, such as shrapnel and is utilized by the radiographer in going over the entire body.

If there is no further discussion, shall we proceed to the next question? What precaution is necessary to avoid over exposure

of the operator to the X-ray? The precautions necessary will depend upon the extent to which the operator is exposed to the rays. I have three operators who are taking pictures all day long, and I have been having them examined, their blood examined every six months. It hasn't revealed anything as yet and I hope it never shall. The blood count is perfectly normal. They do get some relief, because during certain periods of the year students operate the machines. First, they watch the technicians and then they operate the machines themselves, under the supervision of the technicians, hence the technicians do not take all of the pictures themselves.

Now, in the average office a man doesn't take, I suppose, more than eight or ten X-ray cases a day, probably less. And if he uses ordinary precautions I think that should be sufficient. I don't think he would find it necessary to build a lead partition to go behind in order to make his exposures. But I do believe that he ought to avoid placing his fingers in the patient's mouth where they will be subjected to the exposure. May we have further discussion on that?

Member:

What are the early symptoms of the burns, the slightest symptom possible?

I think the earliest symptom that the victim will be aware of, is the dermatitis that will present itself, usually on the fingers. The blood is supposed to reveal the condition first, but generally an examination is not made until after the dermatitis presents itself.

And, as Dr. Hughes I think it was last night told us, there are other symptoms that look very much like those produced by the X-ray. In his case he had a dermatitis produced by the hyposulphite of soda which looked like an X-ray burn. We also get a dermatitis often from novocain, which looks very much the same, in the early stages. Dr. Kells in describing his own symptoms said that in time the accumulative effect of the short exposures produced malignant growths upon the hands.

One interesting feature in connection with exposure to the X-ray was brought out to me this winter when I saw a biologist who had done a great deal of photographic work on growing plants, and he had subjected these plants to different environments. I recall that one series he had growing in an atmosphere of tobacco smoke, and another series he had growing under ex-

posure to the X-ray, and others under the ultraviolet lamp. He had moving pictures of these plants, actually showing their growth. I was very much interested to note that the plants grew much more rapidly and looked healthier when exposed to the X-ray.

Is there any additional point that we might bring out in connection with the precautions necessary to insure safety to the operator?

The next question that I have down here is, "What care must be observed to avoid over exposure of the patient?"

I think it is generally conceded that a patient is safe if he is not subjected to more than two hundred milliamperc seconds per month. Of course this is somewhat arbitrary, and I believe it has been based upon the results observed in superficial X-ray therapy. We have determined approximately how much exposure the average patient will endure without showing a definite reaction. And they regard that as a safe dosage. If we take say the upper molar region and expose the patient for five seconds, and we use a ten milliamperc current, we have exposed him to fifty milliamperc seconds. We don't have to repeat that exposure but four times in order to have reached the maximum dosage for that patient for one month.

Member:

What about facing the rays, have you a screen, Doctor?

Yes, a lead screen helps a great deal. The rays that are especially dangerous are filtered out by use of a fine aluminum filter and it is claimed that bakelite accomplishes the same end. I haven't any accurate proof of this. The Ritter people claim their bakelite cone filters out the dangerous rays the same as this thin sheet of aluminum does.

I think we just need to bear in mind that we should inquire from the patients how recently they have been X-rayed and perhaps how often, and get some line on a possible over-dosage to the patient. I remember back in about 1915, before we had a lead shield around the tubes, we had one patient that we took an anterior posterior view of the head, and very shortly after we found that we had a suit on our hands, because she had lost all of her hair. Well, the suit was pending for quite a long period of time, it was almost two years before it came up, and by that time all her hair had grown back, so we were saved! But I haven't heard of anything like that in recent years. It

used to be done and was more or less common, but the manufacturers have taken precautions to avoid recurrences of that sort.

The exposure the patient is subject to is greatly reduced by the use of fast films. There are features about the fast film, however, that I do not like. I don't think you ever get the detail with a fast film, speed film, that you do with a slower acting one. For a long time I was wedded to the "regular" film, in other words the Eastman or Buck slow film. I was never able to get as good results with any other film as I managed to get with that slow film. But I think, what they now call their radiotised film is practically as good. The emulsion is on both sides of the celluloid and that does cut down the time of exposure. It cuts it down about one-half I think it is. But I am not an advocate of speed films. I think you lose more than you gain by using them.

Member:

Doctor, did you say two milliampere a month?

Two hundred milliampere seconds per month, yes.

Member:

Can you make that on a full survey?

I should have made that clear. For instance, taking up the molar region, we expose the patient for five seconds, and our milliampere are 10, that is 50 milliampere for that region. If we expose that molar region more than four times at that rate, per month, we would be over exposing the patient. But it is seldom necessary to do that. I can't recall an occasion for using the X-ray in one particular region more than four times within thirty days.

And, as I say, I think that figure is quite arbitrary. They have based it on the reaction that people display when treated by the X-rays, and I don't suppose any two people react identically to the rays.

Member:

Doctor, would it be safe to X-ray one area twice in the same day?

Oh, yes sir, I don't see why it wouldn't be perfectly safe to do it four times. Though I think that you would be running less risk if you had an interval between each exposure. There is still much to be known about X-ray burns. We know that

after so long an exposure under certain conditions different people have developed burns. Now, we don't know but what some of the rest of us who have been exposed to a lesser amount, may ultimately show burns. That is altogether possible. Nothing but time will tell.

Member:

Doctor, what do you find in the blood before you get the ulceration?

There is quite an increase in the white blood count. But in our experience we haven't noted that in any of our operators. According to the literature that is the first symptom.

Our question number four is, and our fourth question borders on the second and third: "Should a third party be allowed in the room when X-rays are being taken?"

Should a third party be allowed in the room while we are taking X-rays? Well, I think we would all say generally "no." It is safer for the operator and safer for the patient and safer for the third party if he is outside. The operator has to look after an extra person, there is the possibility of his not behaving as he should, the possibility of his coming in too close contact with the high tension line, but of course that particular danger is done away with entirely in the oil immersed machine.

I recall one unfortunate instance where a third party was present, and I don't think it could have been avoided very well. The patient was about eighteen months old. The mother held the patient in her lap. The little youngster, in the course of the exposure, started to raise its hand, and the mother wanting to coöperate as far as possible, put her own hand up to grab the youngster's, and brought it close enough to the high-tension line so that a spark jumped from the high-tension line to her hand, and from her elbow to the child's face. There was considerable screaming for a moment or two, but it wasn't serious at all.

I can't see any advantage in having a third party in the room. If the patient is extremely nervous and wants to have some one in the room, there might be an excuse for it, but I think even then that you will get along better without the third party.

The fifth question that I have here is, "Are pulpless teeth the only focus of dental origin?" No, I don't think they are.

I think a tooth can be perfectly healthy and normal, or it can be sick, and dying or dead. I don't think it has to be dead

before it becomes a focus of infection. Periodontal infections certainly play an important rôle in this connection also.

I am doing too much talking here! I had anticipated that we would have a group around a table of probably twelve or fifteen men, and that we would talk these things over very informally. I wish the others would contribute more.

Member:

Doctor, can you explain how you tell when a tooth is sick?

I just walked into that trap nicely, didn't I! (Laughter.) Well, that is one thing that the X-ray doesn't tell us. But there are other means. The symptoms of pain help us, tenderness to percussion. Sometimes the X-ray might help us in revealing a pulp stone that might be responsible for a tooth's lowered vitality. And the pulp-tester—I hate to mention that, because I cuss the pulp-tester sometimes!—they are certainly an instrument of the demon, they work when you don't expect them to and don't when you think they should. I have no pulp-tester that is at all reliable.

Hasn't somebody else something to contribute along this line?

Member:

Doctor, how are you going to tell whether the tooth is affecting the patient when it isn't dead?

Well, we very often cannot tell. You must bear in mind that there is that possibility. Some experimental work was done years ago, I think by Hartzel and Henrici with some teeth that had extensive cavities, and they found that those pulps though not exposed, were infected. Now of course if you can work with your knowledge of bacteriology you may find that condition, but it is something you can't find out with the X-ray. I think we ought to look at it not so much from the standpoint of how are we going to tell whether the tooth is sick, as from the standpoint that that tooth *may* still be giving trouble though it is negative so far as we can determine.

Member:

What I want to know is, how are you going to tell whether it is making the patient sick?

That is it, we don't know, we can't always tell. The same as a physician can't tell always that the patient has a certain trouble until some glaring evidence develops, when it is often

too late to treat it. There is still plenty of room for judgment in making a diagnosis. We certainly want to search for every means possible in making an early diagnosis.

Member:

Do you rely on your X-ray findings without clinical examination?

Never, and I am glad you brought that up. I do not rely on an X-ray examination, any more, without a clinical examination along with it. We always want to have the X-ray, plus the patient. I have been fooled in the early days, too often, by perhaps passing up some upper third molar that looked all right in the X-ray, and then find out it was wobbling all around in the mouth, with pus oozing out around the gingival! That is only one type of condition that is very easy to miss if we do not have the patient present.

Member:

Doctor, from your observation with pulp stones, do they ordinarily give trouble as soon as they come, or later?

Well, that is something I can't answer. I have only known three cases where pulp stones produced intense pain. I rather suspect that a good many cases of obscure neuralgia come from pulp stones, but that is something that has not been proven so far.

You may be interested in a report of one case of pulp stones. A friend of mine who had recently graduated from dental school developed a bad knee. In the meantime he had married and started to practice dentistry. He had all the medical and surgical attention that any one could possibly ask for in an effort to run down the cause of that bad knee; and it was thought it was tuberculosis, and it was thought he might have syphilis, that he might have this and that, and everything proved negative.

I had gone over his mouth several times and the pulp-tester showed the teeth were all vital. The X-rays were negative. But one day he said, "Holliday, everything else has been done to me, how about pulling out a tooth?" I said, "All right, which one do you wish to have pulled?" He said, "I don't care which one, a back one, probably." (Laughter.) He knew that his condition was getting worse, he had gotten so he couldn't get out of bed alone in the morning, and he had to give up his practice. So it was really serious.

So I took out an upper molar, and he had such a severe reaction that he almost passed out. We found that the pulp chamber was solid with pulp stones, just one mass. And we made cultures from the contents of the pulp chamber, and ran it through the rabbits and guinea pigs, as was our custom. It wasn't but a short time, I forget how many hours, but it was a matter of hours, before they died. We did post mortems on them and found that they had lesions in their muscles which resembled those that people have when they have arthritis.

Well, we waited, he was in the hospital, unable to go home. In a couple of weeks he had two more teeth taken out, and again he had a severe reaction. And then about a month later he had another one taken out, and the physician that was looking after him said it was not safe to go any further, he couldn't stand to have any more of those teeth removed. It was too late.

Now, that was a member of our own profession.

Member:

Doctor, did you find the pulp stones in the last teeth that you extracted?

Yes sir, every tooth that was taken out showed them. And he had not had any pain in the teeth, the teeth were perfectly comfortable and responsive to vitality tests, thermal and electrical. And yet we got that definite reaction from using the culture from the contents of the pulp chamber.

Member:

Did those pulp stones show up under X-ray?

Well, they did after we started to look for them. I must admit that before that I hadn't been as keen to detect pulp stones as I am now. And the films were not probably as good as those that we are able to secure today. I did not detect them in the early films.

Member:

Didn't the blood show he had infection?

Yes, it did, and they tried to run that infection down in every way possible, and took our word for it that the teeth were all right; and I wasn't alone in that. That is the only consolation I have. There are several others who were also fooled in regard to the teeth. But I think pulp stones are very often serious, much more serious than we think.

Member:

Do pulp stones seem to be worse in some sections than in others, especially in the country?

Well, I haven't had any experience that would lead me to think so.

Member:

They say North Carolina has lots of them?

Yes, that is what I understand.

Member:

Doctor, do you think it is safe to make a diagnosis from a wet plate?

No, I don't think it is safe to make a diagnosis from the wet films. A film can be dried and finished and mounted in about twenty minutes, even less sometimes; but where we are turning out a large number of films, as we are at the clinic at the Medical Center in New York, we are able to turn out a full set of films and have them dried and ready to be viewed by the diagnostician in about twenty minutes after the films are taken. So I don't think there is any real excuse for attempting to diagnose wet films.

Member:

Doctor, those pulps in this case you mentioned, were they vital or gangrenous?

The pulps were still live enough to give a response, but they were decidedly sick and had a foul odor.

May I go back there to that point about the wet films, about viewing the wet films. I know that we do have to view the films while wet when we are in the middle of some surgical operation, when perhaps we have snapped off a tooth. But I can't see any reason why this should be done than in an emergency. Where we are endeavoring to make a careful diagnosis I don't think we ought to temporize with the wet films.

Member:

Do you dry your films in the normal way, or do you use other means?

I can best illustrate that here on the blackboard. We have inserted in the wall, a box, about four feet long and about two feet high, opening both ways, with a door here and a similar

door at the other side in the dark room. When the technician is in the dark room, and the door is open, the door outside cannot be opened. He hangs the films in here, in rows, the hangers running crosswise, and he can hang a very large number in there. Back here we have a heating unit. At this end we have an electric fan, and the warm air not hot, is drawn across these films. They dry in a very short time and dry without curling. It is convenient being able to get at them from either room. Some men dip the films in alcohol after washing them and then they dry more rapidly. I do not think there is any particular advantage in that, however. I think a good many men waste a lot of time by not thoroughly shaking out the water that adheres to the films when they take them out of the wash. You can shake a film almost dry, and after you have shaken the water out, it takes a very short time to finish the job.

Member:

Doctor, I would like to ask you, had those teeth been filled, any large fillings, in the case of this dentist you spoke of?

Yes sir, some were filled and some had never been filled, and there didn't seem to be any difference between those that had been filled and those that had not.

Member:

Do you think there is any relationship between pulp stones and kidney or gall stones?

I have often wondered about that. I haven't any information on the question, and I don't know as anybody else has. I think it would be a mighty good thing to run down. That is something which could be run down perhaps in some of these large hospitals, where dental X-rays have been taken over a period of years and where they also have a general history.

The next question that I happen to have here is, "What are the advantages in Tank Developing?" Those of you that were at the meeting last night know my views in regard to it; but men as prominent as Dr. Simpson don't advocate the use of time and tank method exclusively. Dr. Simpson takes out his films and looks at them periodically, and I don't think there is anybody in the country that gets as beautiful results as Dr. Simpson. In the first place he doesn't use the tube that we use, and he has a number of other peculiarities. He still adheres to the

old gas tube. He is an artist in his field. He will take all day, if necessary, in order to get pictures that he wants; and he does get them.

I don't think there is any question but what, if a man has patience enough, he can get a better film by the use of the gas tube than the Coolidge tube, but it requires more time and patience than most of us have. Of course Dr. Simpson starts right out with an unknown quantity; he doesn't know exactly what current he has, whereas a man using one of the Coolidge tubes has that point pretty well fixed.

I think there must be some advocates of the tray method here. I would like to hear from you.

Member:

I am using the tank method, but I still adhere to the tray method and have for years and years. I get a little better results from the tray method, and I only use the tank method to save time. It does save time, to have all the films drying, twelve or fifteen at a time. And I still use the old gas tube, but I am afraid of it.

Member:

Doctor, some people say that by using the tray method you are able to bring the films out to the same degree of density? What about that?

Well, I don't think that is desirable. If there is a difference in the degree of density in the tissues of that patient, it is a very good thing to know about it. And if you develop the films to a uniform density, then that difference will not show up. Probably if we were still taking five or six exposures a day there wouldn't be any particular object in adhering so closely to the tank and time method, but it is because we have come to find the X-ray so necessary in so many different ways, and we take so many more films than we used to, that I think we should have some standard method of handling them.

Member:

How much time are you taking with your different views in the mouth?

Well, let's see; the time we are using for the duplitised films varies from five seconds in the upper molar region to three seconds in the lower anterior region. Now that again is not

absolute. We always check up a new tube. When we get a tube we haven't tried out, we check up that tube, because they do vary. We take exposures at what we consider the proper time, and then we develop those in fresh solution for five minutes at 65 degrees, and if the results are as we want them we then assume that that is the correct exposure time for that tube. If they are too light, or too dark, then knowing that our developing was correct, we alter the exposure time.

Member:

How often do you change the developing solution?

The frequency with which the developing solution should be changed depends on several factors. It is destroyed or oxidized by use and also by exposure to light and air. I did some work last winter in an institution that had an X-ray outfit that they seldom used. We went into the dark room to develop some films that I had taken. I opened the developing tank and there was a molasses-like solution in there, I asked how fresh the solution was. Well, they thought back and concluded that it was about eighteen months since they had changed it. "Well," I said "that is no good." "Well," they said "we haven't developed half a dozen films in there since then." But of course it was destroyed from age and exposure more than from usage. We had to throw it away and start over again.

The solution that is used right along, where you develop a large number of films as we are doing at the clinic should be changed regularly. We have tanks that hold three gallons, that being a convenient size for use. And we change the solutions in those tanks twice a week. That is probably a little more often than we would actually have to do it. We can't detect any difference in the films at the time we throw the solution away, but we don't want to take any chances on it, we want to feel that we are turning out as good results as can be produced anywhere, and to play safe we throw that solution away.

For the sake of accuracy and convenience we are using the prepared packages of powder in making up our solutions, rather than to weigh out the various ingredients.

They say that is all the time that we have, and I believe we are to transfer into the next room. Thank you. (Much applause.)

SECOND DAY—TUESDAY, MAY 5, 1931

EVENING SESSION

BANQUET—6:15 O'CLOCK

Dr. J. A. McClung, Winston-Salem, called the meeting to order.

Dr. Conrad Watkins, Winston-Salem, asked the blessing.

Dr. Phin Horton, Winston-Salem, introduced Col. W. A. Blair, as toastmaster.

Col. W. A. Blair, Winston-Salem, told many good stories, pulled some timely jokes on several of the men present, and then recognized Dr. Hunt.

Dr. Fred Hunt, Asheville:

My mind travels back over a period of more than thirty years, and there enters a stalwart physical being with that intangible something which we call the mind to match that splendid physique. There was an indomitable being endowed with the spirit of progress that cannot be questioned. Almost immediately that spirit manifested itself by an activity in writing and discussions of several subjects. Soon that alert mind discovered that a complacency had settled on an organization and that the progress was more or less at a standstill.

Such a situation called for action on the part of this young man. A born fighter for progress and right as he saw it, he immediately plunged into the fray and through sheer force of character and personality he succeeded in rescuing an organization from that complacent decadence. He was convinced that his great profession of dentistry must be placed on a higher plane, and with that same indomitable courage he worked to that end.

As a member of the Legislative Committee he was of inestimable value. Largely through his efforts was the dentistry law of 1915 passed, and he was not satisfied, not alone for the present but for the benefits that might accrue to humanity did he exert his energy and influence and it was through his influence that we have a dentist placed on the State Board of Health. But his vision saw beyond the horizon and dentistry was to play a greater part in making the world a greater and better place in which to live. With the determination and against almost unsurmountable obstacles he got this law passed.

Such a record is an enviable one, one to which any man may be justly proud. I refer to none other than Dr. J. N. Johnson, of Goldsboro. (Much applause.) John, I am grateful for this privilege. (Much applause.)

Col. W. A. Blair:

I want to introduce to you next an authority on parliamentary law and a former president of this organization, Dr. J. Martin Fleming.

Dr. J. Martin Fleming, Raleigh:

Mr. Toastmaster, at the last meeting of the State Dental Society in Asheville, over which Dr. John Wheeler presided, it was voted that hereafter we would present each retiring president with an emblem properly engraved to show the love and affection for the man that we had honored with our highest office. Dr. Wheeler said that he thought this should apply to the next president and not to him.

But a motion was passed that the law be made retroactive in order that Dr. Wheeler might be the first of our retiring presidents to receive this emblem. It was fitting that it should be done, because his presiding as president was a climax of more than thirty years of active work for the North Carolina Dental Society.

The intrinsic value of the little present is not very great, but wrapped up in its makeup is the knowledge that there goes with it the love and affection and esteem and admiration of every member of this North Carolina Society. I feel that it was a distinction that was conferred on me in asking me to present this token to Dr. Wheeler. And in behalf of the Society I present it, and wish for you a long life of happiness. (Much applause.)

Dr. John H. Wheeler, Greensboro:

Mr. Toastmaster, Dr. Fleming, Gentlemen, I would like to thank the North Carolina Dental Society for this courtesy that has been extended to me, and I assure you that I shall through life never forget the pleasant associations with this Society, what it has meant to me in my profession; and I hope that our profession will go forward from greater to greater things as the years come on. Especially do I wish for a record in North Carolina, a record of men who always stand for the

best and the highest that is possible to attain in this profession of ours. I thank you. (Much applause.)

Toastmaster:

It is very evident that both Dr. Fleming and Dr. Wheeler have had that treatment in regard to elocution and speaking, and we were delighted to hear from them tonight. But I want to introduce to you next, Dr. Z. L. Edwards, of Washington, which by the way was the first city in the United States to be named for the great Father of his Country. (Applause.)

Dr. Z. L. Edwards, Washington:

Mr. Toastmaster, and Gentlemen and Ladies: There are two reasons why I am especially glad to have the honor of presenting this emblem to you, Paul, as our retiring President. First, because of our warm personal friendship and the pride which I have in the accomplishments of your administration; and second, because of my contact with you during the past year and my observation of your activities justify the conclusion that the many sacrifices which you have made in performing the duties of your office, your devotion to the high ideals of service, your able leadership and wise counsel, and the fidelity with which you have served every trust, you are justly entitled not only to this material manifestation of our high regard and esteem, but the love and affection of the entire membership of the North Carolina Dental Society.

It is our desire that you accept this, not for its intrinsic value or worth, but as a token of our appreciation and in recognition of your initiative, progressiveness and fidelity. May its gold ever symbolize to you the pure and sterling worth of the devotion to duty and unselfish service you have rendered. And in years to come, may you, in the happy retrospection of your experiences be not unmindful of our sincerity on this occasion when we say, in the words of that great Biblical character, "Well done thou good and faithful servant."

So now, on behalf of the North Carolina Dental Society, it is my happy privilege and pleasure to present this, our token. (Much applause.)

Dr. Paul E. Jones, Farmville:

Mr. Toastmaster and Dr. Edwards, and Friends, I deeply appreciate this little token which you present to me, in recognition of what work I have tried to do in the interest of the North

Carolina Dental Society. I shall always cherish this moment and I shall carry it with me as long as I live. It shall be my purpose to live so that you will never have cause to regret that you presented this emblem to me. I thank you. (Much applause.)

Toastmaster:

Let me pause just here for a moment as we think of that old Quaker City of Brotherly Love up yonder, the home of medicine and dentistry, the center of the information of this entire United States of ours, as it has continued to be and will be. We have a representative from that great city here tonight, who is held in high regard by you all. Those of his patients who have learned to know him, think of the lines of the poet "Tender memories around thee twine like the ivy green around the vine." And I want to ask Dr. Ivy, of Philadelphia, if he will not just favor us with one word.

Dr. Robert H. Ivey, Philadelphia: (Applause.)

Mr. Toastmaster, Ladies and Gentlemen, all I can say is that it's been a great privilege to me to be with you. I have enjoyed it immensely and I want to thank you all for all the pleasure that I have derived from this trip. I thank you again. (Much applause.)

Toastmaster:

There is another little town up there in that section of the country, where the trains stop for wood and water, between Philadelphia and Boston. I think it is—what is that name—oh, New York, I believe. (Laughter.) It's a small town on the way. And there I am reminded that if the gentleman came down here for a holiday, I wonder why in the thunder he brought his wife along. (Laughter.) I remember sometime ago when I went over to Quebec to give an address, my wife wired me and says, "Wire me every day so I can know how everything is going," and she wound up by saying "Be good." I wired back, "Too late." (Laughter.) If it is not too late I would like to hear a word from Dr. Holliday. (Applause.)

Dr. Houghton Holliday, New York City:

Mr. Toastmaster, Friends, I feel that I can call you all friends now very freely. A short time ago I couldn't speak so definitely about the hospitality of North Carolinians. I had to look through a glass darkly, but now I know absolutely what

it is, and it can't be beat. I would like to say the same things that Dr. Ivy has said, he has taken it out of my mouth. But, like the Jewish gentlemen that you have all heard about, maybe you will pardon me if I repeat it again. There were two Jewish gentlemen who opened a store in a new community, and they wanted to make a proper impression. So they were given an invitation to a banquet of the commercial club. They equipped themselves with dress suits, but they failed to insist that these suits be decootieized before they put them on. So, during the banquet the two gentlemen were rather ill at ease, and finally when one of them was called upon to speak he got up very willingly and said, "Gentlemen, my father was a patriot. He had brass buttons on his coat (scratches himself), he had stripes on his trousers" (scratches himself), and he went on relieving himself considerably. But then his partner got up, and he said, "Why didn't you leave something for me." But he took care of the situation very quickly, he said "Gentlemen, my father was not a patriot, he did not have brass buttons on his coat (scratches himself), he did not have stripes on his pants (scratches himself), but brains, brains, brains" (scratches head). (Much laughter.)

Toastmaster:

One of the brainest men of the country said recently that "This game of golf has unnecessarily prolonged the lives of many useless citizens." (Laughter.) Some of your lives, I understand, have been prolonged, and I am going to call upon Dr. Guy Mastin to present the golf prizes and to wish you a long life and happiness.

Dr. Guy Mastin, Winston-Salem:

The following gentlemen will come forward: Dr. M. B. Massey, Dr. W. J. Miller. Dr. Massey, you have turned out to be the warmest golfer on the course, with 81, so we are presenting you something that will keep you warm with the compliments of the Chatham Manufacturing Company, which is a blanket. (Applause.) Dr. Miller does not seem to be here. The following men will come forward: Dr. L. M. Daniels, Dr. L. G. Coble, Dr. C. C. Bennett, B. L. Joyner. Dr. Daniels you receive one dozen golf balls; Dr. Coble you receive a nine golf ball set for second prize, and Dr. Joyner, you receive five balls, if you had made a six on the last hole we would have given you a six ball set.

Toastmaster:

Dr. Massey, Dr. Mastin failed to remark in giving you that blanket at the special request of the Chatham Manufacturing Company we are asked to say that their blankets do not do as some other things, like charity, cover a multitude of sins. (Laughter.) And Doctor Bennett, you made the record out there of being "cool headed," and now we are giving you something that will come closer to you, six of them, and we want to make the rest of you as cool as your head, and so the Hanes Manufacturing Company is presenting you these six things that come closer to you. (Laughter.)

The meeting at the banquet then adjourned at 8:10 o'clock p.m.

SECOND DAY—TUESDAY, MAY 5, 1931

EVENING SESSION—8:15 O'CLOCK

Election of Officers

The meeting was called to order by the President at 8:15 p.m.

President Jones:

The North Carolina Dental Society will please come to order. The Constitution provides that the first order of business on Tuesday evening at 8:00 o'clock or soon thereafter, shall be the annual election of officers. I now would like to hear nominations for President-Elect of the North Carolina Dental Society.

Dr. Wilbert T. Jackson of Clinton and Dr. L. M. Edwards of Durham were properly proposed for President-Elect. Dr. Edwards asked that his name be withdrawn and his wishes were duly complied with.

The rules were suspended and Dr. Wilbert T. Jackson was elected President-Elect of the North Carolina Dental Society by acclamation.

Dr. L. M. Edwards of Durham was proposed for the office of Vice-President. The rules were suspended and the Secretary cast the vote of the Society for him.

Dr. N. P. Maddux of Asheville was nominated to succeed himself as Secretary-Treasurer. The rules were suspended and the President cast the vote of the Society for Dr. Maddux.

Dr. E. B. Howle of Raleigh was nominated to succeed himself as member of the State Board of Dental Examiners. The rules were suspended and the Secretary cast the vote of the Society for Dr. Howle.

Dr. J. A. McClung of Winston-Salem was nominated to succeed himself as a member of the State Board of Dental Examiners. The rules were suspended and the Secretary cast the vote of the Society for Dr. McClung.

Dr. Dennis Keel of Greensboro was nominated for Delegate to the American Dental Society for a period of three years. The rules were suspended and the Secretary cast the vote of the Society for Dr. Keel.

Dr. C. E. Minges of Rocky Mount, Dr. Z. L. Edwards of Washington and Dr. W. F. Bell of Asheville were nominated as alternate Delegates to the American Dental Society. The rules were suspended and the Secretary cast the vote of the entire Society for them.

Dr. J. N. Johnson of Goldsboro and Dr. E. A. Branch of Raleigh were proposed to be recommended by the Society for appointment as the Dental member of the North Carolina State Board of Health. Dr. Branch requested that his name be withdrawn and his wishes were properly complied with. The Secretary was instructed to cast the vote of the Society as recommending the appointment by the Governor of Dr. J. N. Johnson.

Selection of Place of Next Meeting

Invitation to meet at Pinehurst for the fifty-eighth meeting in 1932 was extended by Dr. L. V. Henderson and supported by short talks from Dr. Medlin and Dr. Betts.

Invitation to meet at Elizabeth City for the fifty-eighth meeting in 1932 was extended by Dr. H. E. Nixon and supported by short talks from Dr. C. G. Powell, Dr. J. M. Fleming, Dr. J. H. Wheeler, Dr. R. H. Jones, and Dr. R. E. Hunt.

There were 144 votes cast; Pinehurst received 69 and Elizabeth City received 75.

The President declared Elizabeth City as the city for the 1932 annual meeting.

President Jones:

I will ask Dr. Phin Horton to come forward and present the next speaker on our program.

Dr. Phin E. Horton, Winston-Salem:

Mr. President, Ladies and Gentlemen, it is a great pleasure to me to be able to present the next speaker on our program, and he will undoubtedly present us with a paper that will be of great interest in that his subject is "The Influence of General Infections Upon Local Infections."

Dr. Johnson is one of our local men, he is well known and stands at the top of this profession not only in this town but his works have been recognized afar. He has written a number of papers for various and sundry medical magazines, which have been referred to him, many times. Not only that he is nationally known through Harper's Magazine in that he wrote an article which has been discussed a great deal, entitled "The Family Doctor Speaks His Mind," and he spoke his mind. There is another nationally known magazine, the Atlantic Monthly, for which he wrote another article "Medicine and the Middle Class." Both of these articles have created quite a lot of discussion, as I have said.

Dr. Johnson is well known here and favorably so, and he is a delegate from the Medical Society to this Society. I take great pleasure in presenting to you, Dr. Wingate M. Johnson, of Winston-Salem. (Applause.)

Dr. Wingate M. Johnson, Winston-Salem:

Mr. President, Ladies and Gentlemen of the State Dental Society, I wish to thank Dr. Horton for his kind introduction, and I could hardly recognize myself when he got through. And I want to say that I am very glad to be a delegate to this meeting, and if I appear to be a little frightened tonight you can be sure that it is real fright, because if there is one thing a doctor is afraid of it's a dentist! and this many dentists at one time is enough to scare any doctor!

But, seriously, I am glad to have the opportunity of being a delegate to this Society from the Medical Society, and I think that these two professions should and ought to work together in harmony, closer allied, and it's a very good beginning to recognize that fact by coming closer together.

For the subject I have selected the "Influence of General Infections Upon Local Infections." I thought it would be of interest to both physicians and dentists.

THE INFLUENCE OF GENERAL INFECTIONS UPON LOCAL INFECTIONS

By WINGATE M. JOHNSON, Winston-Salem, N. C.

When Dr. Frank Billings set forth the doctrine of focal infection as a cause of systemic disease it speedily made a strong appeal to the medical profession and to the public. It was so tangible, its principles so easily grasped, and its application so often gave startlingly dramatic results, that it is no wonder America is proud to claim it as one of her greatest—perhaps her greatest—contribution to the healing of the nations.

I would not for the world disparage the monumental work of Billings and his followers: but even as the wise man's prayer is to be delivered from responsibility for the acts of his fool friends, so may the father of a valuable idea pray that it be spared from being made ridiculous by its over-enthusiastic advocates. Many years ago Da Costa said that "Enthusiasm is the motive-power of progress,"¹ but recently he declared that "Enthusiasm is as dangerous as prejudice."² Let me give an example or two of the fanatical worship of the doctrine of focal infection:

A few years ago I lost a middle-aged man with a massive pneumonia. Shortly before he died his nephew, a dentist connected with a famous university, called over long distance to ask about him. After I had reported that the patient was quite cyanotic, his pulse feeble and irregular, and that he was showing no response to heroic stimulation, the nephew asked if he did not have some abscessed teeth. When I replied in the affirmative, he said, "Tell him to get those teeth out and he will come around all right."

A lay friend recently related an experience of one of his friends whose wife, a victim of arthritis, had suffered many things at the hands of many physicians. Finally he had taken her to a "specialist" in New York, who examined her very thoroughly, but could find no cause for her disease until he came to the last toe on the last foot. On this toe he found a corn, and under this corn he found some pus. To this he triumphantly pointed as the source of all her trouble—and the delighted husband had not yet had time to be disillusioned!

The object of this paper, however, is not to find fault with the doctrine of focal infection: it is to call attention to the converse idea that general or systemic infections may have a great influence upon local infections or lesions. Let me illustrate by a few brief case reports.

It is so generally known that the chronic infections, syphilis and tuberculosis, have an unfavorable effect upon the healing of lesions that I will cite only one case, using the other case-reports to illustrate the effect of acute infections:

Case 1 is a double-header. In my early days of practice I vaccinated a brother and sister. At first I was delighted to have them both take; later I was dismayed when they would not "untake." Both children developed large indolent ulcers that refused to heal for weeks, until I learned that the father was syphilitic, and put them on mixed treatment. Then they both healed as if by magic.

Case 2. A six-year old boy, always strong and vigorous, fell from his bicycle and cut a small gash in his scalp, which I cleansed with an antiseptic solution and covered with gauze. Next day he developed scarlet fever, which was then epidemic. To my dismay the scalp wound suppurred, and a large abscess formed under the scalp, which had to be opened and drained for two weeks. Finally he developed erysipelas in the wound, which spread over his head and face.

Case 3 was a young married woman who had a carbuncle on the back of her neck. (Incidentally, prior to the fashion of bobbed hair for women, carbuncles in that locality were peculiar to men; but of late years I have seen as many in women as in men.) It had practically healed when she developed the influenzal infection then prevalent. Two or three days afterwards the carbuncle took on renewed activity, drained freely, and finally she also had a rather extensive erysipelas which began in the site of the carbuncle.

Case 4 was a young man who had a cyst removed from the back of his hand by a competent surgeon. Two days later he contracted influenza, of the respiratory type. The wound on his hand almost immediately began to suppurate, and the pus burrowed extensively under the skin. The stitches had to be removed and the opening enlarged for drainage.

Case 5 was a six-year old boy with a scratch on the back of his left index finger, which was healing nicely until he got a grip infection, with bronchitis. The scratch on the finger became so angry-looking and the inflammation spread over the whole finger, showing no signs of healing until he ceased to have fever.

Case 6 was a middle-aged lady who, during an influenzal attack, developed a painful abscess at the root of a tooth, which resulted in the loss of the tooth.

The next three cases occurred in the practice of my surgical colleague, Dr. Valk.

Case 7 was that of a man who had his forearm caught in a roller. The skin of the forearm was turned down like a cuff. It had been turned back and the cut edges reunited. After two weeks it had almost healed, when suddenly it became very much inflamed and suppurred. The patient had fever and general malaise, which was explained a few days later when he developed a copious measles eruption. The arm continued to be a source of anxiety and pain until the measles fever subsided, when it also quieted down.

Case 8 was that of a young woman who was convalescing from a clean appendectomy. The stitches had been removed from the incision, which had healed nicely, when she began to run a température and the wound edges simply dropped apart. A few days later, she also showed the eruption of measles. There was no attempt at union in the wound until the attack of measles had subsided.

Case 9 was that of a young man with a cut in his forehead, which had been sutured and had apparently healed by first intention until he developed acute tonsillitis, when the wound suppurred and had to be drained.

These cases are given briefly as reminders that a systemic infection may exert a profound influence upon a local infection. How this is done, I do not know. The first thought that naturally occurs

is that the fever that accompanies these general infections, such as measles, scarlet fever, and tonsillitis is the one symptom common to all of them; but a moment's reflection rules out fever as the sole cause, for every surgeon of experience has had numerous cases that ran high fever for days from pyelitis or pneumonia with perfect healing of an incision. The so-called post-surgical fever that often follows operations apparently has no ill effect upon wound-healing. Again, in the notoriously slow healing of wounds in syphilitic and diabetic patients, fever plays no part.

To my mind, it is much more probable that the toxins peculiar to the diseases in question exercise a deleterious effect upon the tissues, lowering their vitality and thus checking the healing process. One thought that occurs is that in the cases cited the acute infections all produce more systemic reaction—general aching, pains in joints and muscles, and other evidences of marked toxemia—than does pyelitis, pneumonia, and the so-called post-surgical fever; though I do not know that this point will bear too close inspection. I do not know how to explain it.

Of particular interest at present, and along the line of thought of this paper, is the changing conception of arthritis. When the doctrine of focal infection was first introduced, it was thought that arthritis would soon be conquered; and a few case-reports of brilliant cures following the removal of foci of infection strengthened this belief. It was not long, however, until we began to be disillusioned. More and more cases remained stubbornly resistant to the removal of tonsils, teeth, gall-bladders, and the drainage of sinuses. It remains to be seen what the removal of infected corns will do, but most medical veterans will be skeptical!

As a result of repeated disillusionment, the medical profession for the most part has settled down into an attitude of discouraged indifference, leaving arthritis as one of the blots upon the brilliant record of medical progress—and little short of a disgrace to the profession. It is no wonder that its poor victims have gone the rounds of the chiropractors, osteopaths, and other cults. Very few of them have been claimed by the Christian Scientists, however; they suffer too much pain.

A few brave souls have kept up the search for relief for these poor sufferers, and in very recent times it seems that they are really "getting somewhere." So far as I know, these men are unanimous in their belief that focal infection plays but a minor rôle in the etiology of most cases of arthritis, and that it is a generalized disease with joint manifestations. Pemberton,³ who is one of the most earnest students of the subject, goes so far as to say that "Sometimes indeed, possibly often, focal infection is the result of the background rather than the cause of it." Goldthwait,⁴ whose opinion is entitled to the greatest respect, divides arthritis into three groups: the atrophic, the hypertrophic, and the infectious, and declares that the infectious is the least common of the three. "While all these conditions do exist," he says, "infectious arthritis is much less common than the other forms and of the specific causes, the teeth and tonsils are much less frequently the primary cause of the difficulty than has been supposed of late, judging by the literature." It may

be interesting that he gives as his conception of the chief causes of arthritis: fatigue, faulty posture, visceroptosis, improper food, insufficient exercise, inadequate clothing and exposure to cold, chance infections, and drugs, especially alcohol and tobacco.

The lesson I have gleaned from the recent copious literature on the subject of arthritis is that the treatment of the patient as a whole—by the means included under the term, general hygienic treatment—is of even greater importance than the removal of foci of infection. I would not minimize the importance of ridding the patient of such foci, but think the American Committee for the Control of Rheumatism expressed the correct idea in saying that "the removal of focal infection does not constitute treatment, it merely initiates it."

In conclusion, I wish to reiterate that the object of this paper is not to attack the doctrine of focal infection, which is too valuable and too well-entrenched to need defense; but rather to call attention to the other side of the question, by pointing out that general infections may have a markedly deleterious effect upon local infections.

REFERENCES.

¹The Papers and Speeches of John Chalmers da Costa—Saunders, 1931. Page 218.

²The same, page 245.

³Ralph Pemberton, "Developments in the Problems of Arthritis," Journal A. M. A., January 3, 1931. Page 34.

⁴Joel E. Goldthwait, "Arthritis—General Considerations," American Medicine, October, 1930. Page 590.

President Jones:

I would like to have a discussion of that paper by Dr. Johnson.

Dr. McConnell:

Mr. President and faithful gentlemen, this is one paper that I have been delighted to hear. I am always open for information. I have an open mind and I am glad to hear an M.D. admit that thing, both coming and going. We have heard so much about the focal infections causing sickness that I am certainly glad to hear one man say something about sickness causing focal infections, because we have all seen that. There isn't a man here of any experience in the practice of dentistry that couldn't tell you that if we have a long continued influenza epidemic that he will find more and more patients coming in with pulps dying in teeth. That is common knowledge among all you dentists and yet a great many times you haven't connected those two facts. And it is certainly delightful to hear the medical man give us the other viewpoint of it, because that

is something that I was speaking of last night that we should join in with the medical man and treat *our* patients, not his patients but our patients and give your patients that united effort. That subject is one that certainly deserves our best effort and often when we have done all we can we are disappointed in the results.

And I had an experience this past summer that taught me the lesson that systemic trouble had a great deal to do with things. I had a patient that came in with a Vincent infection. Well, I knew his position well and I knew this man well and knew his condition. I knew that man was diabetic, and he had just this ulcer on one portion of his mouth, and with all I could do with local treatment and all the physician could do with his general treatment, that man sluffed out a big section of his lower jaw, and we worked faithfully, together, and the place healed up nicely after a long time. We lost our patient finally through uremic poisoning after the place had healed.

But that certainly taught me a lesson. It would have been in any ordinary individual a trifling injury, and yet with our hard work, we saved him from one thing only to later lose him from the general infection.

I think at this late hour I could hardly add anything to the doctor's excellent paper that would repay these faithful few for their time, so I simply want to thank the doctor for giving us the other side. (Applause.)

Dr. John H. Wheeler, Greensboro:

I have enjoyed that paper so very much, because it's so thoroughly in harmony with what I have been believing, thinking, and preaching for the past few years that I wish I might have had a copy of the doctor's paper to have studied a bit and I will look with interest for the copy in the proceedings.

There is no desire on my part to minimize the damage that is done to the system as a whole through focal infection. I think the teeth must take their share, though it's a very small share, comparatively speaking. I think that we have gone wild—I am talking about you, Doctor, now, as well as myself. Some of the hardest fights I have ever had were with some of my very good physician friends, and yet I don't blame them. They have a case of arthritis and they have a case of neuritis, they have kidney lesions, they have done their best, they have exhibited

their efforts, and then they come in and just insist that I shall do a thing that was contrary to my opinion. I can't do it. I have done it a few times, and then when a patient comes back as I had one to come in just a few weeks ago. She was an extremist. And I radiographed her mouth and while I was doing that she looked up and says, "Dr. Wheeler, they have taken out all six of my teeth and it hasn't done me any good." Now, if she had been coming back to me I would have felt awful, only I never would have taken them out.

Now don't misunderstand me, Doctor, nor friends of mine here in the convention: I am not trying to minimize, but I am trying to follow out the line of thought that the doctor gave us, that we will look deeper.

Now the doctor didn't know that he was speaking on a subject that is my hobby. But he doubtless and probably will tell you that conservatively speaking eighty per cent of all patients are infected with toxemia in some form. Now, when you show me thirty-eight feet of intestinal tract, and an irritated stomach lining, food bolted down without proper saliva, sent down to the stomach in a condition not to be handled by the juices of the stomach, sent from there on down to the intestines not in condition to be handled there, and on down, and that observation to me means more in my opinion than all the teeth and all the tonsils put together!

Now I have been conducting a little survey along that line the last three or four years. I have been inquiring from every patient, "Are you suffering from constipation?" and the answer will come in the negative. I will say, "Do you take any pills, or salts or anything like that," and they will say, "Oh, I do about every night, sometimes not more than twice a week." Sure, you are rid of constipation! And they will radiograph negative pictures, and yet, without any rhyme or reason you yank out that tooth!

Doctor, mastication is a function, absolutely as much so as the kidney, as a function; one is voluntary and the other is involuntary, that is the only difference. The function of mastication is very nearly as important as the function of the kidney. If the Lord Almighty hadn't intended for you to use your teeth he would have given us gizzards. (Laughter.) The chicken has a gizzard and he doesn't have to chew.

Now, the Doctor has brought us positive proof in the cases that he has recited to us tonight, a case of an open wound and a case of influenzal infection, etc. I don't know how many cases he has cited.

Now I don't know how many cases of mastoid sinus are charged up to infected teeth. I know that if you will examine a great number of schools you will find very few tooth roots that enter there. Why I think so many enter there is because of shooting that picture at an angle of forty-five degrees and we are throwing the bony structures, process, down over the angle of that, and it looks that way.

Now I had a case under observation, a doctor who had a patient with a radical sinus, the boy was up against it on both sides. He had resorted to everything that he knew; he had gone so far as to use the light, the violet ray, in fact I saw him doing it. He did not get results. So he had to curate that sinus, and as a last resort he said to me, "I have destroyed every nerve in that side of that man's face." Well, I didn't think he had. He thought so. I was talking to him over the phone and the man was sitting there listening in to the conversation with me over the phone.

Well, I didn't say "I don't think you have, Buddy," I says "Send him over." It was about four weeks before he got over, and when he did I went all over the left side of his mouth, all the nerve connections. Every tooth was just as vital as could be, he hadn't destroyed the nerves and yet he thought he had. Why hadn't he destroyed them? because the ends of the roots of those teeth hadn't been reached, it didn't penetrate the sinus, when he curated it passed over the little elevations in the bone.

And I met that man on the street and I said, "Why, you haven't destroyed any nerves." "Well" he says, "be damned if I know why I didn't." (Laughter.) He said, "I tried to." "Well," I said "the reason you didn't is because you couldn't." "Why?" he says, and I said "Because the roots didn't go into the sinus." I says "You felt the bumps in there where the convex surfaces of the bone are," and I said "those nerves, as you well know, are running right down through that bone, they were not through the sinus, and you haven't hurt them at all, they are in perfect shape." Now, suppose I had just taken his surmise—because the boy was honest—he just thought he had done it.

I appreciate what the Doctor has brought to us tonight and he has certainly put us to thinking. Doctor, I thank you very much for your paper.

President Jones:

Is there any other discussion? If not, I will ask Doctor Johnson to close his discussion.

Dr. Wingate M. Johnson, Winston-Salem:

Mr. President, I have nothing to say, I believe, about this paper. I thank you. (Applause.)

President Jones:

I believe the Secretary has some telegrams here that we would like to have read at this open session.

Secretary Maddux read telegrams of greetings from Robert Todd Oliver, President, American Dental Association; Dr. R. F. Simmons, President, Virginia State Dental Society; and Dr. A. M. Wash, Secretary-Treasurer, Virginia State Dental Society.

President Jones:

In a meeting of the House of Delegates, today at noon, we had up a question that they wished to refer to the general assembly of the North Carolina Dental Society for discussion. I will ask Dr. Howle to present that matter at this time.

Dr. E. B. Howle, Raleigh:

Mr. President, I move that this be deferred to some future meeting when we have a larger attendance.

This motion was seconded, put by the President, and carried.

President Jones:

Now I am going to ask Dr. Fred Hale to present the report of the Necrology Committee.

Dr. G. Fred Hale, Raleigh:

Gentlemen, Dr. Oscar Hooks of Wilson, Chairman of the Necrology Committee could not make this report and asked me to read it for him. Since our last meeting the Necrology Committee has to report the death of six members of this Society: I will ask Dr. G. A. Lazenby of Statesville to read the memorial of Dr. W. Charles Weatherman; Dr. Ralph Jarrett of Charlotte to read the memorial of Dr. Kemp Funderburk;

Dr. L. V. Henderson of Pinehurst to read the memorial of Dr. Richard Taft Taylor; Dr. J. E. L. Thomas of Tarboro to read the memorial of Dr. George E. Weeks; Dr. H. E. Nixon of Elizabeth City to read the memorial of Dr. E. Jordan Griffin; Dr. A. D. Abernathy of Granite Falls to read the memorial of Dr. I. P. Jeter

DR. W. CHARLES WEATHERMAN

On December 23, 1930, the friends of Dr. Charlie Weatherman were shocked to hear of his death.

Dr. Weatherman was born in Iredell County in the year of 1878. He entered Dental College rather late in life, graduating from the Atlanta-Southern in 1918. For several years he enjoyed good health, and maintained a good practice in the city of Statesville. The past few years his health began to fail him and he sought rest in the mountains of Carolina at Linville Falls during the summer months. Here he still carried on in the profession he loved so well.

The following is copied from The American Magazine, issue of February, 1931: "A Dentist of the Hilltops."

"In the shade of a broad-limbed oak tree at Linville Falls, high in the Blue Ridge Mountains of North Carolina, is one of the strangest dental offices in the world. Its waiting-room is a flower-dotted field, and its walls are the distant hills. Here, every summer mountain folk come to have their teeth repaired in the outdoor clinic established by Dr. Charlie Weatherman, who was once a backwoods boy in these same hills. They call him the "tooth dentist from down yonder." His equipment consists of several drawers of instruments and a foot-operated drill.

"Charlie Weatherman was born and raised in a one-room log cabin. Up to the time he was twenty-one he had had five months schooling. Deciding to get more "larnin'" he set out as a wandering minstrel, first with his fiddle (a banjo), then with a talking machine that was the marvel of the countryside. With the profits from his music shows he put himself through grammar school. Graduating, he became an organ salesman. At the age of thirty-five he went to a dental college at Atlanta, and later established a practice in Statesville, N. C. Now he spends six summer months with his mountain patients."

Written by Marinobel Smith.

Dr. Weatherman was a good dentist, a fine gentleman, and a staunch friend. He will be missed.

G. A. LAZENBY.

DR. KEMP FUNDERBURK

The passing of a respected and beloved member like Kemp Funderburk, of Monroe, N. C., on 12th of March, 1931, poignantly reminds us all of the uncertainty of life and the sureness of death. He had been critically ill for four weeks from a heart affection. Everything

possibly known to medical skill and science was done and performed for him without avail, and his death in early life saddened the entire community in which he lived and served the people and his God; and today, as we note his absence, today as we miss him from among us, miss his cheery smile and hearty greeting, we bow our heads a moment and shed a silent tear, in memory and remembrance of the many fine and rare qualities that distinguished him as a dentist, a good citizen, a devoted husband and father, and a gentleman without fear and without reproach.

A newspaper of his home town and county, after paying him a tribute of distinction and affection, gave the following data:

"Dr. Funderburk was a devoted member of the Baptist Church, was Past Master of the local Masonic lodge and a charter member of the local Rotary club.

Dr. Funderburk was the son of the late Mr. and Mrs. N. A. Funderburk, of South Monroe Township, and was born in 1892. He received his education at Cary High School, North Carolina University, and Atlanta Dental College, Atlanta, Ga. He graduated in 1919 and came to Monroe and began practicing his profession.

He was married to Miss Annie Beam, of Shelby, in 1922, who, with a two-year old daughter, Nancy Beam Funderburk, survive.

Dr. Funderburk is also survived by the following brothers and sisters: Ray Funderburk, superintendent of public instruction, Fayetteville; Dr. N. A. Funderburk, surgeon, Trion, Ga.; Mrs. Henry Gribble, Buford Township; Mrs. J. B. Bass, Wingate; Mrs. B. K. Laney, Atlanta; Mrs. H. W. B. Whitley, Raeford, and Mrs. Lee Medlin, Monroe."

Capable and efficient beyond his years, gentle, and tender and gracious, he had stretching out before him apparently many years of health and success and happiness; with every prospect of success and prosperity, everything in life to live for, everything to be preserved for, the Master of Men saw fit to call him home to his eternal resting place and reward, leaving a void and a vacancy it will be difficult for us to fill in our ranks, leaving us, at the same time, the vivid imprint of his personality, the pleasant recollection of his knightly courage, the inspiring and inspiriting thought of his ideals which he lived, and, finally, leaving us the deathless example of his high personal and professional dreams and aspirations, of the noble life that he led and the brave death that he died.

RICHARD TAFT TAYLOR

Dr. Taylor, who was a son of Richard E. Taylor, D.D.S., and Emma Taft Taylor, of Cincinnati, Ohio, was born March 3, 1868, and died March 1, 1931. After attending St. Xavier's College he matriculated at Miami Dental College, from which institution he graduated in 1900 with the degree of D.D.S. He then became associated with his father in the practice of dentistry, and soon built up a large clientele. In 1906 he entered the University of Cincinnati, from which he acquired an M.D. degree in 1910. The fall of 1912 he came to Pinehurst and opened an office in the Carolina Hotel, where, by his

skill and gentlemanly personality he soon established a large practice, among which were many notables from all over the United States and Canada.

Dr. Taylor was a member of the following societies: The Cincinnati Academy of Medicine, Third District of N. C. Dental Association, and the Moore County Dental Society. He had traveled extensively in Europe, South America and Mexico. He is survived by two sisters and three brothers.

In the death of Dr. Taylor the North Carolina Dental Society has lost one of its valued members, and the writer, a true friend. His remains rest by the side of his mother and father in Spring Grove Cemetery, Cincinnati, Ohio.

DR. GEORGE EARL WEEKS

Dr. George Earl Weeks was born March 7, 1883, in Epworth, Edgecombe County, North Carolina. He was educated at Wilkinson Male Academy, Oak Ridge, and the University of Maryland, graduating in dentistry in the spring of 1906.

Dr. Weeks began the practice of dentistry in Farmville in June, 1906, and three years later began practice in Tarboro, N. C., where he admirably served his public through his profession for twenty-two years.

In June, 1906, Dr. Weeks was married to Lena Rivers Pittman, of Edgecombe County, who, with three children, two boys and one girl, survive.

Dr. Weeks was a Christian man of sterling character. He was a member of the Calvary Episcopal Church. He was unassuming in his manner, a lover of nature, and especially fond of pure-bred dogs.

Dr. Weeks died on the 22d day of April, 1931, at 8:10 a.m. from paralysis due to the Pasteur treatment, after an illness of six days. When it became known that Dr. Weeks was dead, universal sorrow was widespread. The great love and devotion to this gentleman and prince among all classes, was truly manifested by the enormous crowd of people who paid their last respects by their attendance at his funeral, and by the large floral contribution.

In the death of Dr. Weeks North Carolina has lost one of its finest men, as a father, as a citizen, and as a dentist.

J. E. L. THOMAS.

DR. E. JORDAN GRIFFIN

Dr. E. Jordan Griffin was born in Woodland, Northampton County, North Carolina, February 18th, 1867. He was the son of the late Exum O. and Ann (Baugham) Griffin.

Dr. Griffin received his preliminary education in the public and private schools of Woodland, and later attended the Westown Boarding School near Westchester, Pennsylvania.

In 1896 he received his degree of Doctor of Dental Surgery from the Philadelphia Dental College. In the same year he located in his home town of Woodland and practiced there until 1899, and then moved to Edenton, North Carolina, and practiced there until his death.

For thirty years Dr. Griffin was one of the most vital forces for progress and advancement at Edenton, N. C. A leader not only in his profession in Chowan County, but in private life as well. His gifted and broad nature found outlet also in various lines of public service. His address was genial and engaging and always he had the demeanor of a gentleman.

Dr. Griffin's active and well rounded life has been a distinct asset not only to his family and profession, but he was keenly interested in the happenings which were making world history.

On October 26, 1904, Dr. Griffin was united in marriage to Miss Imogene Story of Gates County, North Carolina. She was a woman of rare grace and charm. For twenty-seven years as a devoted husband and so lovely a wife and surrounded with the Christian influence which she would create, gave a new meaning to his life and into their home came one son, Dr. Wallace S. Griffin, now practicing his father's profession in Edenton, N. C.

Dr. Griffin was a member of the North Carolina Dental Society, and for several years he was connected with the State Board of Health doing educational work. He represented Chowan County in the General Assembly of North Carolina in 1917 and 1918. In 1921 and 1922 he represented the first Senatorial District of this State in the Senate. He was a member of the Friends Church and a member of the Masonic Lodge, No. 7.

Dr. Griffin was paralyzed on April 30, 1930. He died November 11, 1930. In the death of Dr. Griffin his family has lost a devoted husband and father, his patients have lost a true friend and a skillful dentist, the profession has lost a conscientious, honorable and ethical member.

Be it therefore resolved, That the North Carolina Dental Society has lost a devoted member and one possessing all the traits of a gentleman; and be it further resolved, That a copy of this memorial be spread upon the minutes of the North Carolina Dental Society; and be it further resolved, That a copy of this memorial be sent to his beloved widow and son.

H. E. NIXON.

DR. I. P. JETER

Dr. I. P. Jeter was born December 15, 1861, and died April 12, 1931. Dr. Jeter was in my district. I have no memorial. Dr. Little is supposed to have this. The finest tributes I have known paid any man, he did. He says, "I slept with him, studied with him, lived with him; my heart will not let me go on the floor and make a statement." He said, "I cannot stand under it." His soul went out to him, and he says, "Doctor, you state to the boys how I feel about it." He loved him.

And I knew the man, and I will say that dentistry has lost an able soul who helped carry on its burdens for years in the past. May peace be his, is my prayer.

Dr. G. Fred Hale:

I want to recognize Dr. John Wheeler.

Dr. John Wheeler, Greensboro:

Mr. President, I want to ask the privilege of filing with the Editor a little bit later, a paper on Mr. Fred McCulloch. Fred McCulloch was not a dentist, but he was held in such high esteem by the dental profession of North Carolina that he was made an honorary member of this Society; and with your kind permission I will file this with the Editor a little bit later.

President Jones:

Without objection, we will be delighted to add that privilege.

Is there anything further to come before this session of the North Carolina Dental Society?

MR. FRED McCULLOCH

Fred McCulloch, the subject of this sketch, was born in New York State. When quite a young man he went with the S. S. White Dental Manufacturing Company's Atlanta house. For a number of years he traveled for this house and later was called to a desk in the office where he remained until me and Perrin Thompson of Columbia organized the Thompson Dental Company of Columbia and Greensboro.

In the first years of his work he, like all supply house salesmen, carried a large stock of supplies in trunks. The coming of Mac as he was lovingly known was quite an event in the lives of the local dentists. Their stocks were replenished with the smaller articles and the heavy stuff was ordered shipped.

Probably he was the best known of all the salesmen and one of the most popular. So fond were the North Carolina dentists of him that he was made an honorary member of the State Society.

He is survived by his wife and one daughter, Mrs. James Wilkins.

It will not be an easy matter to forget Mac, his gentleness of manner, his lovable disposition, his efficiency in business, and his kindness of heart endeared him to all who knew him.

JNO. H. WHEELER.

Dr. J. S. Spurgeon, Hillsboro:

Mr. President, I would like to say a word to express thanks to the R. J. Reynolds Company for the courtesy shown in inviting us to see the wonderful machinery for making Camel cigarettes.

President Jones:

Thank you, Dr. Spurgeon. Is there any further business?

Dr. Z. L. Edwards, Washington:

I think that motion should be amended to include not only the Reynolds Tobacco Company but the citizens of Winston-Salem, as a whole, and the management of the Robert E. Lee Hotel.

Dr. J. S. Spurgeon, Hillsboro:

I accept that amendment.

This motion was seconded, put by the President and carried.

President Jones:

We are supposed to have a meeting of the House of Delegates after this adjournment. We are running behind time and we have got some business that we have got to get over. If there is nothing further to come before this session, I will entertain a motion to adjourn this session of the North Carolina Dental Society. (Motion was made and seconded.)

I declare this session of the North Carolina Dental Society adjourned.

The meeting then adjourned at 10:30 o'clock p.m., Tuesday, April 5, 1931.

SECOND DAY—TUESDAY, MAY 5, 1931

MEETING OF HOUSE OF DELEGATES

The House of Delegates met at 10:30 o'clock p.m.

It was moved and seconded that the rules be suspended and that it be understood a quorum is present without the formal calling of the roll.

This motion was put by the President and carried.

President Jones:

The Secretary has a resolution that was presented at a previous session of the House of Delegates amending the Constitution and By-Laws. I will ask him to read that resolution at this time.

Secretary Maddux:

An amendment to the Constitution and By-Laws:

Be it provided that any ten members of the House of Delegates may file a minority report dissenting from action of House of Delegates and appeal to the General Session of the Society. Signed, R. A. Little.

Dr. C. E. Minges, Rocky Mount:

I move that the amendment be accepted. (The motion was seconded by several members.)

President Jones:

Any discussion?

The motion was put by the President and carried, and the amendment is adopted.

President Jones:

We have at this time scheduled on the program, the report of the Committee on the President's Address. Is that committee ready to report?

Dr. Z. L. Edwards, Washington:

Mr. President:

Winston-Salem, May 5, 1931.

To the House of Delegates,

North Carolina Dental Association:

Your Committee, appointed for the purpose of studying the recommendations made in the annual address of our President, Dr. Paul Jones, of Farmville, beg to submit the following:

In the first place, we desire to express our deep appreciation for the services rendered the association by our President during the past year, for his interest in the welfare of the Society and its various subdivisions and for the evident thought and effort spent in connection with the preparation of his annual address. From the standpoint of clarity, forcefulness and logic, we feel that we express the sentiment of the association as a whole in classifying it as one of the best addresses ever delivered at a State Society meeting.

Five major recommendations were made in the President's address. The first of these was as follows:

"That the incoming President appoint the Executive Committee as follows: One member for three years, one member for two years and one member for one year; so that, beginning with our 1932 annual meeting, the incoming President shall appoint one member of the Executive Committee for three years and name the Chairman."

Your Committee advocates the acceptance of that recommendation as read.

The second recommendation was: "That we amend the By-Laws to provide a salary of two hundred dollars annually for the Secretary and Treasurer's office, and that the chairman of the Executive Committee be designated as custodian of the bond required of the Secretary."

Your Committee advocates that the salary for the Secretary and Treasurer be fixed at one hundred and fifty dollars annually and that he shall give bond immediately upon assuming office, and that the chairman of the Executive Committee be designated as custodian of said bond.

The third recommendation was: "That we amend the By-Laws to provide a salary of two hundred dollars annually for the Editor and Publisher."

Your Committee wishes to take up this recommendation in connection with the fifth, made by our President, which was: "That the incoming President appoint a Special Committee to incorporate in the proper sections and articles all amendments and alterations to our Constitution and By-Laws since its adoption on April 16, 1928, and that this be printed and mailed to all members in good standing with the next issue of the *BULLETIN*."

Regarding these two recommendations—the third and fifth—your Committee advocates that the salary of the Editor and Publisher be fixed at one hundred and fifty dollars annually and that instead of appointing a Special Committee for the purpose mentioned in the fifth recommendation, the Editor and Publisher be required to keep a record of whatever additions or alterations may be made in our By-Laws and that he see to it that they are published in the proceedings.

The fourth recommendation submitted by our President was: "That we amend the By-Laws to provide that the outgoing Secretary-Treasurer make in addition to the report now required a final report to the Executive Committee within thirty days after the annual meeting, this to be published in the proceedings. That the books, vouchers, checks, stubs and all papers having to do with the finances of the Society shall be delivered to the outgoing Executive Committee, who shall have them audited by a licensed C. P. A., at the expense of the Society and delivered to the incoming Executive Committee within two months of adjournment of the annual meeting."

Your Committee advocates the adoption of that recommendation as written.

COMMITTEE ON PRESIDENT'S ADDRESS.
Z. L. EDWARDS, *Chairman.*

Dr. J. Martin Fleming, Raleigh:

I move you, Sir, that the report be adopted.

President Jones:

Are there any other committees to report at this time?

Dr. J. Martin Fleming, Raleigh:

Mr. President, I should just like to say here for the benefit of the Secretary, that it was with a great deal of reluctance that we recommended a cut in the present salary; but it was due to a desire of the administration and those who are working in coöperation with them to place the financial condition of the North Carolina Dental Society on an economic basis; and it was only through a desire to place our Society in a position where it would be self-supporting, rather than to take away from the Secretary's office any funds to which he might justly be entitled. We all recognize that the Secretary from a standpoint of money or from the standpoint of service that he renders, does not get pay for his services, and that it is only due to the love for the work and his interest in the progress of the North Carolina Dental Society that he does it.

And I feel that Dr. Maddux deserves commendation for the unselfish performances of his duties during the past year, and I just wanted to give that personal recognition for the benefit of Dr. Maddux. (Applause.)

Dr. W. M. Robey, of Charlotte:

Mr. President, I would like to give you the report of the Committee on Relations of Physician and Dentist. To begin with, I want to say that this report comes from the Chairman and not the Committee, as I haven't had a conference with the Committee, except odds and ends. As Chairman I frankly admit that I wasn't familiar with the work to be done until rather late, but we did send two delegates to the North Carolina State Medical Society, Dr. H. O. Lineberger, of Raleigh, who read a paper on the relationship of dentistry to medicine, and Dr. Wallace Gibbs, of Charlotte, who read a paper on the subject of pyorrhea. I haven't the full subject that he gave. But I thought we could get this report off.

I would suggest as a practical proposition in this matter, that the Committee on Relations Between Dentistry and Medicine arrange to get the dental papers in such form that they can be presented to a member of the Medical Society for a formal discussion before the meeting, so that we won't have the haphazard discussions that we get here; and vice-versa, that we request the Medical Society to submit the papers to a member or members of the Dental Society to discuss it from a dental standpoint. For as one member has expressed the thought, we don't speak

in the same language, and by getting a joint discussion on these subjects it will train us to a certain extent to get together and understand what we are trying to talk about, and at the same time create an interest that we haven't got now.

We appoint twenty-five delegates from the North Carolina Dental Society to the Medical Society, and twenty-five members of the Medical Society are appointed as delegates to the Dental Society, and there is no particular place for them to come in. We wander in and sit down and move around among them, and neither side takes any direct interest or knows just where these subjects are on the program for a limited discussion from the floor. We could create an interest that would be very valuable to both professions.

President Jones:

You have heard the report of Dr. Robey's Committee; what is your pleasure?

Motion was made that the report be adopted, seconded, put by the President and carried.

We will have the report of the Executive Committee at this time.

Dr. Clyde E. Minges, Rocky Mount:

Mr. President, Gentlemen:

**REPORT OF THE EXECUTIVE COMMITTEE NORTH
CAROLINA DENTAL SOCIETY**

Mr. President, Members of the North Carolina Dental Society, your Executive Committee begs leave to report as follows:

Our first meeting was held in Asheville, N. C., for the purpose of electing an Editor-Publisher, in accordance with the new provisions of the Constitution and By-Laws. Dr. G. Fred Hale, of Raleigh, North Carolina, was selected for this position. We desire to express our appreciation for his efforts and feel that the excellence of his bulletins, published without cost to the Society, will command him to you and justify our confidence in him.

On June 7th, a joint meeting of the Executive and Program Committees were held at Bayview; many excellent suggestions for the ensuing meeting were discussed and various outstanding clinicians were proposed. No definite action being taken at this time, the meeting adjourned, to re-convene in Greensboro, August 9th, 1930.

At the Greensboro meeting, a tentative program was adopted, and ways and means of financing same discussed. This discussion developed the fact that our bank balance amounted to \$32.00. A complete audit by a certified public accountant of the books, covering a period of four years was made, and the books were found correct. A further investigation disclosed the fact that heretofore, the Fi-

nancial Reports of the Secretary-Treasurer had been presented during the meeting at a time when the Treasurer's report would show a large balance, but would not show the heavy outstanding obligations which would soon require settlement, thereby leaving an enormous impression as to our net worth. We found that, heretofore, after all indebtedness had been discharged, comparatively small balances remained—we still further found that 20 members were dropped from the roll in 1929 for nonpayment of dues, and in 1930 the number increased to fifty. It thereupon became evident that the most rigid economy must be effected, and although strict adherence to this policy has been constantly observed, we feel nevertheless, that our program has been of the highest order.

Your Committee earnestly desires to express its appreciation to the officers and committees for their untiring zeal, constructive suggestions and splendid coöperation.

Especially would we thank our President, who through the wisdom of his leadership has been an inspiration to us.

To Dr. Harry Keel, General Chairman of the Arrangements Committee, we owe our deepest appreciation for the wonderful work he and his associates have done to make this meeting both pleasant and profitable.

Furthermore, we particularly wish to thank the Legislative Committee (Dr. J. N. Johnson, Chairman) for the work they have done this year. Their efforts which resulted in the enactment of a law specifying that a dentist be named on every County Board of Health in North Carolina is the most far-reaching piece of legislation of the decade so far as North Carolina Dentistry is concerned.

To the press, also are we grateful for the large contribution which they have made to the success of our meeting through the liberal space they have given our announcements. Also the management of this Hotel for the many courtesies extended.

Conscious of our many shortcomings, we have to the best of our ability administered the affairs of this Society, fairly and impartially, and for the best interests of all concerned.

Respectfully submitted,

CLYDE MINGES, *Chairman.*

T. W. EDWADRS,

E. B. HOWLE.

President Jones:

You have heard the report of Dr. Minges for the Executive Committee; what is the pleasure of the House of Delegates?

It was moved, seconded, put, and carried that the report be adopted.

President Jones:

Are there any other committees ready to report at this time?

Dr. J. A. McClung, Winston-Salem:

Mr. President, I have a brief report from the Clinic Board of Censors, which I will be glad to present, as follows:

REPORT OF THE CLINIC BOARD OF CENSORS

This Committee has visited all clinics and commended all the clinics presented. We believe that the clinics are better than those of past meetings. We regret that we are not permitted to recommend more than four clinics to go to the American Dental Association.

Your Committee therefore recommends the following clinicians: Dr. F. O. Alford, Dr. H. E. Story, Dr. H. K. Thompson, Dr. L. G. Coble.

Respectfully submitted,

J. A. MCCLUNG, *Chairman.*
A. P. BEAM,
R. M. OLIVE,
J. G. POOLE,
A. C. CURRENT.

The report was adopted by the House of Delegates.

The report of the State Institutions Committee was made by Dr. A. L. Wooten, which was adopted by the House of Delegates, reading as follows:

REPORT OF STATE INSTITUTIONS COMMITTEE

Your State Institutions Committee, after interviewing the Superintendents of the various State Institutions finds that the following Institutions have adequate Dental Service:

State Prison, School for the Blind, Orthopedic Hospital, Caswell Training School, State Hospital—Goldsboro, Samarcand, State Hospital—Raleigh.

Service at the State Sanatorium is inadequate—having only two (2) days each week, whereas, a full time dentist is needed.

The following Institutions report no funds for Dental Work:

State Hospital—Morganton, School for Deaf and Dumb, Jackson Training School, State Farm Colony, East Carolina Industrial School for Boys.

We recommend that the State Society use its influence in securing necessary appropriations for this various obviously necessary service.

Respectfully submitted,

A. L. WOOTEN, *Chairman.*
A. M. SCHULTZ,
W. HOWARD BRANCH,
JAS. B. RICHARDSON,
GUY E. PIGFORD,
L. J. MEREDITH,
H. A. EDWARDS.

President Jones:

The question is, the adoption of this report. Is there any further discussion?

It was moved, seconded, put by the President and carried, that the report of the State Institutions Committee be adopted.

President Jones:

Dr. J. Martin Fleming has a matter he wishes to bring up at this time.

Dr. J. Martin Fleming, Raleigh:

It is resolved that the North Carolina Dental Society endorse the activities of the Department of Oral Hygiene of the North Carolina State Board of Health. This with the O.K. of the Resolutions Committee. J. Martin Fleming, J. S. Spurgeon, F. L. Hunt.

It was moved that this report be adopted, which was seconded, put by the President and carried.

Dr. J. Martin Fleming, Raleigh:

Mr. President, just one other thing: Dr. Hunt and Dr. Branch and myself were appointed on a committee to choose an emblem to be presented to each retiring President of the Society. After dealing with the jewelers of the State, we provided this badge that has been presented tonight to two retiring presidents. The Committee feels that any man who has ever been President has the privilege of providing one of these badges at his own expense and wear it; and he can provide that through H. Mahler & Sons, in Raleigh, at a cost of around \$20.00. These cost something more than that as it cost a little more to fix the dies and get these original ones. The Committee recommends that any past President be permitted to procure one at his own expense and wear it.

Dr. C. E. Minges, Rocky Mount:

I move that the North Carolina Dental Society sanction the proposition as presented by Dr. Fleming.

This motion was seconded, as put by the President, and carried.

Dr. J. H. Wheeler, Greensboro:

Mr. President, we would like to report as to the liability insurance, that it stands at 284 in the Aetna Life Insurance Company, of Greensboro.

President Jones:

You have heard this report, what will you do with it.

It was moved that the report be adopted, seconded, put by the President and carried.

Dr. J. Martin Fleming, Raleigh:

Mr. President, I move you, Sir, that the papers read by Dr. H. O. Lineberger of Raleigh and Dr. Wallace D. Gibbs of Charlotte before the North Carolina Medical Society in Durham in April of 1931 be incorporated in our 1931 proceedings for a permanent record.

The motion was seconded, put and passed.

PYORRHEA AS A FOCUS OF INFECTION AND A FEW SUGGESTIONS FOR ITS EARLY RECOGNITION BY THE PHYSICIAN

By Dr. Wallace D. Gibbs, Charlotte, N. C.

Mr. President, members of the North Carolina Medical Society, Visitors:

I am honored, and dentistry is honored, when I am asked to address so distinguished a group as the North Carolina Medical Society. Had I been asked to discuss, or even to fully appreciate, any subject strictly within the realm of medicine I should feel hopelessly incompetent to do so. But, inasmuch as my subject deals with dentistry, or more properly a specialty of dentistry, perhaps I may be able to give a few thoughts and offer a few suggestions that may prove helpful.

For the wonderful progress which has been made by the medical profession, not only in North Carolina, but throughout the world one can have but the highest praise. May I not say, likewise, for the progress of dentistry, particularly during the past dozen years or more, one can have only the greatest admiration?

Dentistry, until recent years, was little more than a highly specialized trade. It is true that we studied, along with the medical student, many of the basic subjects of medicine; but very few of us used the knowledge gained, our time being almost entirely occupied after graduation with mechanical thoughts. We became, perhaps, the world's best mechanics, and we were wonderfully proud of our achievements and the services we were rendering humanity. For sheer ingenuity I have yet to see the equal of the old-fashioned dentist. And inasmuch as we shall always need dental mechanics, we cannot praise too highly our predecessors who gave us the fundamentals of dental mechanics. However, we were rudely awakened from our mechanical complacency in the early part of the present century by a member of your profession, Sir William Hunter, in his denunciations of many of our appliances from a health standpoint. This and later the challenge of Mayo and others, not only caused dentistry to reconstruct her ideas of mechanical appliances, but at the same time caused us to consider the health of the individual as a whole, not merely the teeth as such. Thus dentistry had the dual problem of caring for the teeth and considering their relation to the health of the individual. This was a large order for a profession whose thoughts had for generations been chiefly along mechanical lines. The change could not be effected over night.

It meant the dentist would have to become better acquainted with pathology, bacteriology, physiology, the X-ray and many other subjects. Dentistry has faithfully endeavored to meet this obligation. But, we did not have the background nor the training that you of the medical profession have had. We must, therefore, turn to the only source from which we could get this information—the medical profession. And we wish here to express our appreciation for the wonderful help and encouragement you have given us, individually and collectively. We must continue to depend upon you and we feel encouraged to believe that you will aid us in the future as you have in the past.

The object of dentistry in the past was to preserve the teeth. The object of dentistry today is to preserve the teeth and their adjacent and supporting structures in a state of health, that they may be an asset rather than a liability to the patient's health. It is well for us to keep in mind that it is our duty to preserve the teeth. It is a simple matter to order a tooth removed and usually it is a simple matter to remove it. This is one way of getting rid of infection—perhaps. When it is necessary I should be the last to oppose it, for the health of the patient is worth more than a tooth, or for that matter than all the teeth. However, there are many teeth and their supporting structures that can be effectively rid of infection without the necessity of extraction.

Generally speaking, we are confronted with two pathological conditions in the mouth. One which attacks the tooth itself and is called dental caries; the other which attacks the supporting structures of the tooth and is called pyorrhea. Each is decay or degeneration of tissues. And although there are many theories and individual opinions, the etiology of either condition has never been established. Our predecessors assumed that dental caries was curable or at least amenable to treatment, and, therefore, devoted their time almost exclusively to it. The other condition, which they called pyorrhea for lack of better nomenclature, they considered incurable and condemned it as such. Hence, pyorrhea has been the despair of the dental profession. It has been called incurable and the disease of mystery. This has been largely because dentists have considered pyorrhea as one disease or condition, covering about all of the benign lesions of the supporting tissues of the teeth; and further, because dentists have looked for a specific cause and a specific cure. For years we looked for a specific infection or at least a constant strain of organism. Failing in this many still considered it primarily an infection. So long as we thought along such lines little or no progress was made. Pyorrhea is an infection, but the primary lesion is brought on by other causes, infection being secondary. Having arrived at this conclusion several years ago, and further having observed in many cases referred to me as pyorrhea that there were a great variety of symptoms present; that many cases presented symptoms absent in other cases, I came to the conclusion that we were treating a variety of cases as a single condition, and that there must be different causes for many of the cases presented. I, therefore, made a chart enumerating these lesions, and from the chart a diagnosis sheet, to which I have since adhered. I make an individual examina-

tion of each case before attempting its treatment. Thus, I have found that many conditions of the mouth are of local origin; others of systemic origin, and others are apparently influenced by both factors. For example local filth in the mouth, such as calcareous deposits; food debris; poorly constructed dental appliances, and other irritants undoubtedly cause a lowered resistance to the part with a breaking down of tissue, allowing invasions of bacteria. Likewise diabetes, anemia, syphilis and many other systemic diseases are manifested in the mouth and tend to break down the tissues. We might also mention various drugs, poisons, individual habits, pregnancy, diet, metabolism and heredity. Thus while we may eliminate the infection, as we are doing and as we have done in innumerable cases in the past, the condition will often return, to the despair of both dentist and patient. Hence pyorrhea as a disease of mystery. May I not say that the mystery lies in our lack of diagnosis, or more fundamentally in our lack of the proper knowledge of those subjects which would enable us to make a proper diagnosis. Pyorrhea becomes curable and is no longer a disease of mystery when dentists have sufficient understanding of those necessary factors which govern vitality of tissues, and apply it. It is necessary to eliminate infection in pyorrhea as elsewhere, and treatment by various means will do this, but permanency of results depends upon eliminating the cause.

Pyorrhea is a focus of infection of the mouth, and contrary to general opinion, I feel that it is the most prevalent and potent of mouth infections. It is a disease of filth and a respecter of no person. It is found in mouths in which the most scrupulous hygiene is maintained. For we must remember that the lesion is beneath the gum line and is therefore not accessible to any known means of cleansing. The area of tissue involvement is greater than that of any other dental infection, or indeed of all other dental infections combined. I have ascertained by actual measurement of the inner circumference of the sockets of the teeth that the area of tissue possible of involvement is 20,000 square mm. as compared with 100 square mm. in the infection of the average apical or abscessed tooth. And when we consider that the outer circumference of the sockets was not measured, nor that of the soft tissues involved, the amount of tissue possible of involvement in a pyorrhctic infection is probably several times as great as the figure given. There are approximately 60 roots in a full set of teeth, and each root has four surfaces, each capable of a separate pocket, making it possible for one to have 240 pockets in a pyorrhctic infection. Each pocket is capable of holding a drop of pus. I recently made an examination of a young lady with a member of your profession, and as near as we could ascertain there was a pocket on each surface of each root, and each pocket revealed an exudate. This was at 9:00 a.m. At 5:00 p.m. we were able to obtain apparently the same amount of exudate from the pockets. Does this mean that the discharge was replacing itself every eight hours? If so, would there not be approximately 720 minimis of pus daily from such a case? How much of this is being absorbed we do not know; that much of it must be absorbed is only a matter of common sense. It has been said that the abscessed tooth does not have drainage and that the pyorrhctic tooth does.

This is not always true. There are abscessed teeth that do have drainage, and there are pyorrhetic teeth that do not have drainage. Consider the hyperemia, calcareous deposits and other obstructions to the pocket. There are pockets present and often overlooked in which it is difficult to pass the finest probe. Consider also the law of gravity in the lower jaw. And, I do not feel that it is necessary that we have infection under pressure for absorption. This is not according to the laws of physics. Again, many areas of infection in the apical region are encapsulated. In support of this theory of pyorrhea as a focus of infection I should like to give a few cases from my files:

Case 1. Man, 35. Came in on crutches in 1920. Joints stiff; complexion sallow; no appetite; nervous; poor sleeper; weight 103. Pyorrhea, with so great a loss of bone that treatment was out of the question. There were 32 teeth; no abscesses; no decay; no impactions. All teeth and all necrotic tissue thoroughly removed under general anesthesia. Patient reported a year later for artificial teeth, at which time there was no stiffness in joints; he did not use crutches; color was normal; appetite normal; sleeping soundly; weight 164. No other treatment given.

Case 2. Woman, 32. Nervous, sallow, poor sleeper; very poor appetite; weight 88. January, 1931, operated surgically on pyorrhetic pockets. April 1st, 1931, weight 101, very little evidence of nervousness; appetite good; complexion very much improved; sleeping well. No other treatment given.

Case 3. Woman, 20. With all exactly the symptoms of Case 2. February 3, 1931, weight 92. Treated by sub-gingival curettage. All symptoms have practically disappeared. Weight at present 99; no other treatment given.

Case 4. Man, 30. Complained of pain in back and of continued soreness of muscles in back of neck. Had tried various treatments was several years with no improvement. Operated on pyorrhetic lesions surgically (radical) December 7, 1930. March 28, 1931, reported all symptoms disappeared and has no return for two months. A gain in weight of two pounds. No other treatment given.

Case 5. Woman, 41. Sallow, dyspeptic, complaining of nausea, indigestion and pains around heart, especially after eating. Various treatments without relief. Pyorrhea treated from September, 1930, to December, 1930, by subgingival curettage, massage and local stimulants. Lesions completely healed; other symptoms disappeared patient increased in weight. No other treatment given.

These records I give in support of the theory of pyorrhea as a focus of infection. I could give other case reports from my files, covering a period of the past five years, during which time I have devoted myself exclusively to this phase of dentistry.

There are two essentials in eliminating pyorrhea. The first is correct diagnosis, and the second is correct treatment. All of us fail at times in both essentials. This is not, however, an argument against pyorrhea as a focus of infection. Further, we may correctly diagnose and treat a case, and the general condition remain unchanged. There may be contributing or secondary foci. Again, if we leave a portion of the infection after the treatment or extraction

of the teeth the condition would not clear up. And X-rays reveal, in residual infection, we do just that. I would like to call attention just here to the fallacy that extraction of a pyorrheal tooth always cures the condition. To extract a tooth in pyorrhea only means that we have established better drainage—the seat of the trouble being in the bone socket and adjacent soft tissues. This improved drainage does sometimes eliminate, but not always. The proper procedure is, of course, to thoroughly remove all the diseased area by curettage after extraction—and this does not always effect a cure. Because the primary cause of the breaking down of tissue has not necessarily been removed. In support of this theory I offer, first, the fact that in cases where pyorrhea was undoubtedly the cause of systemic disturbance, the complete removal of all pyorrhctic teeth, followed by thorough curettage, the trouble persists. Again, many wearers of artificial teeth (dentures) have to have these dentures remade time after time, due to the absorption of the alveolar ridge. The denture is dependent upon perfect adaptation to the ridge, and the appliance does not change. Therefore a looseness means but one thing—the absorption of the ridge. I should like to quote from an English writer in a recent issue of one of our journals: "Pyorrhea has become appallingly common and is affecting quite young persons. I have seen a girl, with 9 otherwise perfect teeth badly involved. Her dentist had advised extraction, because in his opinion pyorrhea was incurable. This displayed an ignorance of fundamental facts. The teeth were being sacrificed when they had nothing to do with the trouble which was in the alveolus." Again from the same writer ". . . Unfortunately such absorptions will continue and it will be impossible to make satisfactory dentures. I have had a case, which after extraction to supposedly cure pyorrhea, required the denture remodelling 12 times in a few years." These and many other cases known to all dentists should be convincing evidence that extraction is not the remedy for pyorrhea. If we wish to remove the infection surgically, surely this can be done as well, or better, without the removal of the tooth.

The earliest recognition of pyorrhea is only possible by a full mouth X-ray of all the teeth and their supporting structures. No examination in dentistry is complete without this. Those who have followed this part of a dental examination, I am sure will support this statement. Those who have not are simply not aware of its advantages. The microscope is also a valuable aid—especially in such diseases as Vincents angina. I assume, of course, that in the use of these two aids to diagnosis one is not only familiar with the technique, but is also able to correctly interpret the findings.

A few simple observations by the physician would, in most cases, be sufficient in detecting the more pronounced cases of pyorrhea and aid in sending them to the dentist for confirmation. (1) The color of the gum should be pink—any discoloration is suspicious. (2) The texture of the gum should be firm and hard—any softness or sponginess is indicative. (3) The crest of the gum should be at the enamel of the tooth, or at the neck or constricted portion—any recession is suspicious. (4) Gums that bleed freely upon pressure are suspicious—and this should be ascertained by pressure, not by

statement of the patient. (5) Any exudate by pressure on the gums—and often you will not get this except by persistent and hard pressure, well directed. (6) Accumulation of calcium or food debris around or between the teeth—this is almost conclusive evidence. (7) Teeth out of line or mal-opposed. (8) Loose teeth. (9) Pockets. A tooth has a fibrous connection at the neck or more properly about 1 mm. below, and therefore a probe passed along the root will, in most cases, reveal the pocket. The foregoing routine examination by physicians will detect the majority of the cases of pyorrhea, and the time required should not be more than 10 minutes. But a casual glance in the mouth will not do as an examination for pyorrhea. While evidence from the above examination is always positive, absence of all of the above symptoms does not argue that the case is negative. The X-ray, alone, will give us the final information in case all other evidence is negative.

In conclusion, may I not say, that while medicine and dentistry are separate professions, and neither has any desire to encroach upon the other, yet in light of present knowledge, is not the close co-operation between the two most desirable in the best interest of the patient? The public looks to you for care and advice of their bodies, and upon your advice much depends. Yours is a great responsibility. We are dentists, and our duty is the preservation of the teeth and their supporting structures in a state of health. If conditions in our field are a source of trouble or danger to your work, will you not permit us to help you; and, if so, will you not aid us in the early detection of these maladies, especially those that have been considered incurable, in order that we may get them before they are incurable? And will you not help us to eliminate the infection without the necessity of the loss of the teeth, when this is possible? This means a routine adequate examination of the mouth by the physician.

(Read before the North Carolina Medical Society in Durham, April, 1931.)

RELATIONSHIP BETWEEN MEDICINE AND DENTISTRY

By Dr. H. O. Lineberger, Raleigh, N. C.

Mr. President, members of the North Carolina Medical Society: The members of the North Carolina Dental Society would have me bring greetings and to assure you of our appreciation for your kind invitation to meet with you and to participate in your program. It is our wish that the 78th Annual Meeting will go down in history as one of the best you have ever had.

In reviewing the relationship of the Medical and Dental professions in North Carolina, we find there are many things which have brought the activities of our professions closer together. In a very brief way, I shall touch on a few of the more salient causes and also bring to your attention some of the very valuable results already accomplished.

In a paper, "Is There a Need for a Closer Coöperation Between the Physician and Dentist?" read before this Society last year at

Pinehurst. Dr. J. Martin Fleming, a member of the North Carolina Dental Society, very ably discussed many of the early problems of our professions and very clearly answered in the affirmative the question asked in the title of his paper. It is, however, necessary that I review some of the points brought out by him in order that I may more clearly show various stages in our professional life which have been more or less the causes for our friendlier relationship.

In the earlier days of our profession, a dentist was primarily a mechanic. He usually chose dentistry because he had a certain mechanical turn or tendency in that line. The colleges spent a greater part of their time in teaching their students operative and prosthetic technic, giving very little attention to the Health Service. The dental graduate found himself entirely interested in the task of relieving local pain and restoring lost tooth structure.

The operation of extracting teeth was considered an exceedingly ordinary procedure and was performed by all physicians, drug clerks, landlords or anyone who happened to possess a rusty pair of forceps. In fact, the only patients who sought the service of a licensed dentist were usually those of the higher class who felt they could afford to have their teeth filled with gold or possibly a new set of teeth made primarily for appearance.

It was perfectly natural that a profession trained to restore lost tooth structure should do everything in its power to treat and save every tooth, not once thinking of the various systemic envolvments we were possibly causing. As the demand for dental service increased, many young men sought a dental education. This, of course, flooded the dental colleges and in many cases caused the establishing of schools which were of low standards. This period of changes in the professional education system gave birth from the medical side to such professions as osteopathy and the chiropractor. To our profession it gave the advertising dental parlors. While in this more or less confused state of educational standards, the Carnegie Foundation came to the rescue and made their famous survey of both medical and dental schools. Rather than be exposed, many schools closed their doors and many others were forced to improve their standards. This Standardization of Education gave to both professions a higher and much needed self-respect and also created in each a higher respect for the other.

In the professions, as in most every other walk of life, necessity brings about many changes or reforms which would otherwise be very slowly realized. There was no great reformer who can be given credit for bringing about a closer coöperation between the physician and the dentist, while on the other hand, when it was found to be an act of extreme expediency and a great improvement in the class of professional service which we might render the patient, we see it gradually being realized.

The coming of the X-ray did much to reveal many hidden abnormalities. It was the use of this machine which brought to many dentists the sad realization that the restoration he had thought perfect was a most dangerous foci of infection.

Soon after the X-ray became generally used in the field of diagnosis we find scientific men in both professions studying, in detail, infection in its various ramifications of the body. It was the knowledge of this definite work which was being carried on in the various scientific laboratories, which led the famous Dr. Charles Mayo to make the statement, which was in substance, that the next great advancement in health service should come from the dentist. All are familiar with just what did happen and how it has made our professions more dependent on each other.

Many of the more enthusiastic members of both professions went in for a 100 per cent removal of all possible foci of infection, but as usual, it was the rational and conservative minded, who brought us to our more constructive thinking selves. However, it was during this period that we were brought into closer coöperation with each other. Today we find ourselves at that point where no reputable physician or dentist would dare treat a case with any complications without the aid and service of the other. No hospital or diagnostic clinic would think of passing on a patient's true condition without a definite report from a dental surgeon of known ability and unquestioned reputation.

In North Carolina, the great work our State Board of Health and other State agencies are doing along the line of corrective, preventative and educational medicine, combined with the various publicity agents, has created a health minded people. They are not only consulting us individually but to a great degree measuring our professional ability by our willingness to consult with others in the associated fields.

Getting more specific as to the friendly relations already established in our State, I would call your attention to many joint medical and dental societies already established in counties like Wayne, Pitt, Guilford and others, with occasional joint meetings in practically every county and city in the State.

A few years ago, the officers of both the State Medical and the State Dental Societies sought to arrange a joint meeting of the two societies, and with your permission, I am going to read the report our committee made to the State Dental Society meeting in Asheville last year.

Quote: "The first definite suggestion for a joint meeting of the two societies came out of a conference of Dr. L. A. Crowell, President of the North Carolina Medical Society, and Dr. I. R. Self, President of the North Carolina Dental Society, at their home town of Lincolnton. Both presidents were anxious for a better fraternal relationship between the two societies, and immediately set about to arrange for such a meeting.

The Councilors of the North Carolina Medical Society met in Raleigh in May, 1929, at which time the suggestion of the two presidents relative to the joint meeting was brought up for discussion. At this meeting the North Carolina Dental Society was officially represented by Dr. H. O. Lineberger. After some discussion the Councilors voted to invite the members of the North Carolina Dental Society to meet in joint session with the North Carolina Medical

Society at Pinehurst in April, 1930, and instructed the representatives of the North Carolina Dental Society to transmit such an invitation to the meeting of the North Carolina Dental Society at Wrightsville Beach, held in June, 1929.

The invitation was extended to the North Carolina Dental Society but on the same date which the invitation from the Medical Society was presented, a lengthy letter was received from Mr. Tuft, manager of the Carolina Hotel at Pinehurst, stating that it would be impossible to entertain both societies at Pinehurst in April. This letter precluded our acceptance of the invitation of the Medical Society until further negotiations could be had.

The incoming president was instructed to name a committee to confer with a similar committee from the North Carolina Medical Society relative to arranging a joint meeting. A committee composed of Drs. J. Martin Fleming, J. S. Spurgeon and H. O. Lineberger, chairman, was named.

In a letter, under date of June 19th, Dr. L. B. McBrayer, Secretary of the North Carolina Medical Society, was duly notified of the action of the North Carolina Dental Society. The president of the Medical Society was notified of our action by their Secretary. On December 31st, a copy of Dr. McBrayer's letter addressed to Drs. Parrott, Burrus and Murphy, of the North Carolina Medical Society, was received. To quote one paragraph: "The purpose of these two committees as suggested by the State Dental Society, is to take under consideration the matter of holding a joint meeting of the State Dental Society and the State Medical Society, the idea suggested by some of the dentists being that the meetings be held in the same town, with one-half day of the State Medical Society program to be devoted to matters that would be of mutual interest and to be attended by all dentists, and perhaps one-half day session of the State Dental Society to be likewise planned and held, to which all fellows of the State Medical Society would be admitted."

In a letter dated January 2nd, addressed to Drs. H. O. Lineberger, J. T. Burrus and J. G. Murphy, Dr. James M. Parrott suggested that Dr. Lineberger call a meeting of the joint committee. After conferring with all members of the joint committee, a meeting was called January 15th at the Sir Walter Hotel, Raleigh. All members of the committee were present and all phases of the joint meeting gone into and the following action taken:

First: That the North Carolina Medical Society invite the North Carolina Dental Society to send representatives to appear on their program (two papers) and that a delegation of not less than fifty dentists to visit the meeting of the North Carolina Medical Society meeting at Pinehurst in April.

Second: That the North Carolina Dental Society invite the North Carolina Medical Society to send representatives to appear on our program (two papers) and a delegation of fifty members of the North Carolina Medical Society to the State meeting in Asheville.

It was also recommended that permanent Liaison Committee from each society be appointed.

In other words, if the committees from the two societies have interpreted the sentiments of the two societies correctly, a closer relationship is desired and for that reason we felt that an exchange of essayists and a visiting delegation from one society to the other would stimulate interest in a joint meeting.

The official invitation as recommended, was issued by the officers of the two societies.

Dr. J. Martin Fleming and Dr. J. S. Betts were named to present papers before the North Carolina Medical Society. Both papers were excellently written and ably presented and made a profound impression on the members of the Medical Society. Forty fraternal delegates attended the medical meeting at Pinehurst on Tuesday, April 29th.

Your committee wishes to strongly recommend a permanent Liaison Committee with the North Carolina Medical Society and an occasional exchange of fraternal delegates and essayists.

We wish to thank Drs. Parrott, Murphy and Burrus for the gentle and coöperative attitude manifest in their deliberation with our committee looking forward to a closer relationship between the two societies. The committee wishes further to thank Dr. H. H. Briggs and Dr. Standing Norman for the able papers they have presented and every fraternal delegate from the Medical Society for the sacrifice in time they have made in visiting our meeting and we hope that in the near future the plan may be repeated." End of quotation.

A direct result of our coöperative efforts was manifest in the recent Legislature, where members of the medical and dental professions were found fighting shoulder to shoulder against the abolition of certain boards and for other constructive measures. The members of the dental profession are especially grateful to Drs. Burrus, Hardy, Killian, Ruffin, DeHart, Long and Rogers, who were members of the Legislature and who aided in the passage of the Burrus-Johnson Bill, which placed a dentist on each County Board of Health. Dr. Burrus was a co-sponsor of the bill.

We are grateful to all the members of the North Carolina Medical Society for your splendid coöperative spirit and trust that our understanding of each other will grow as the time passes, to the end that it will be of mutual helpfulness and a very beneficial and lasting service to our mutual patients and to the public.

(Read before the North Carolina Medical Society in Durham, April, 1931.)

President Jones:

If there is no further business, upon a motion to adjourn, I declare the House of Delegates adjourned for this meeting.

The House of Delegates then, at 11:30 o'clock p.m., Tuesday, May 5, 1931, adjourned.

THIRD DAY—WEDNESDAY, MAY 6, 1931

MORNING SESSION

The meeting was called to order by the President at 9:00 o'clock a.m.

President Jones:

I declare the North Carolina Dental Society called to order.

At this time I would like to recognize Dr. John A. McClung, of Winston-Salem.

Dr. John A. McClung:

Mr. President, Members of the North Carolina Dental Society, I am called upon to do something that gives me a great deal of pleasure, although it is rather unexpected.

We have with us this morning a man who has national reputation as a teacher, and a dentist. I have the honor and distinction of being a schoolmate and fraternity brother of this distinguished gentleman. And it gives me a great deal of pleasure to introduce to you this morning, Dr. J. Ben Robinson, University of Maryland, Baltimore College of Surgery, Dental Department. (Much applause.)

Dr. J. Ben Robinson, D.D.S., F.A.C.D., Baltimore, Maryland:

Mr. President and Members of the North Carolina Dental Society, visitors and friends: I look upon it as a distinct honor to be invited to appear on your program, with the splendid talent which has preceded me and which is to come. It has been a pleasure to devote my time and my energies to contribute to your program. When I was invited to come here, I halted between two opinions as to what subject I might present to you that would be both of interest and benefit.

An early American statesman said, that the hope of the republican form of government depended upon the education of the people of that republic. And I have conceived the idea that the hope and the future of dentistry depend upon education, not only our accredited systems and forms of education, but the education of the profession to the needs of better education. And that is the theme of my discourse this morning. You men are receiving day in and day out those phases of instruc-

tion that have to do with the application of the sciences of dentistry when we see fit to call it the art of dentistry.

This paper is long and I am going to watch you and when I see you are getting tired I am going to quit.

THE INFLUENCE OF DENTAL EDUCATION ON PROFESSIONAL PROGRESS AND ATTAINMENTS

J. BEN ROBINSON, D.D.S., F.A.C.D.

When we review the history of dentistry and come to understand the influence education has exerted on the development of our profession, we are impressed with the importance of an improved system of dental education in promoting the quality and usefulness of dental service. Each of us is interested in dental education because of its profound influence on the continued improvement of professional knowledge and success of the individual members of the profession. Dentistry, as it exists today, represents not mere casual conditions but is a composite picture of many ideals and an ever increasing store of knowledge brought together through various educative processes. These are contributions of a vast array of professional forbears who have through other ages, especially the past nine decades, moved across the stage of our professional life. To trace all these contributions back to their sources would perhaps not justify the required expenditure of time and energy. It is sufficient to recognize their existence and the value of such contributions to our store of knowledge. Our present status represents the sum total of all processes by means of which our profession has transmitted to successive generations its acquired powers and store of knowledge with a view of perpetuating its own existence and growth. "The present contains all that there is. It is holy ground for it is the past, and it is the future. At the same time it must be observed that an age is no less past if it existed two hundred years ago than if it existed two thousand years ago. Do not be deceived by the pedantry of dates. The ages of Shakespeare and of Moliere are no less past than are the ages of Sophocles and Virgil. The communion of saints is a great and inspiring assemblage, but it has only one possible hall of meeting, and that is, the present; and the mere lapse of time through which any particular group of saints must travel to reach the meeting place, makes very little difference."* It is this view of dentistry that we are invited to study, to analyze, to evaluate, and having assessed it, to adjust ourselves to that place in the profession which offers best opportunity for service, and contribute our influence to an improved educational system that our heritage may be enriched in behalf of the present good and for the benefit of those who are to follow in the years to come.

All vocations when analyzed reveal the dual existence of a basic science and a developed art. These factors may be revealed by reference to certain occupations which illustrate this dual relation. The art of farming has been practiced for ages. It is but recently

*Whitehead—"The Aims of Education."

that the science of agriculture has become established through the discoveries of research. The art of medicine is as old as the human race, having existed among the ancients in every civilization, but its science has more recently attained its present high order. We recognize the science of medicine and the physicians' art, the science of agriculture and the art of farming, the science of architecture and the art of building, the science of dentistry and the dentists' art, etc. Chronologically art has always preceded science, but the order is reversed in education once a science is established. While these two aspects of all enterprise are demonstrable they cannot be separated. The development and perfection of one depends upon proper attention to the demands of the other. It is, therefore, necessary that this dual relation be recognized if we would successfully solve the dental educational problems of today for the improvements of opportunities for those of tomorrow.

Philosophy may be regarded as a search for first principles, or that science which undertakes to explain facts and existence with their causes and laws. The philosophy of a profession may be discovered in a study of the history of its education with reference to the influences which have determined the present character of its standards of professional education. Because of its importance and an improved appreciation for our dental philosophy a brief review of the history of dental education would seem desirable.

The dental art had its beginning in the early dawn of human history and originated in response to the necessity for relief from oral suffering. History can fix no exact period to call the beginning of dentistry since the practice of the dental art seems to have existed in prehistoric times. However, we are reasonably sure that the beginning falls within that period of development of the human race known as the "instinctive epoch" or the epoch when primitive man instinctively invented means for securing comfort and self protection. The first effort to provide relief from oral discomforts was no doubt concurrent with the beginning of general medicine which is shown to have existed in the earliest historic records of all ancient people, and which we conclude, existed in a crude form in prehistoric times. As the light of civilization appeared in the various parts of the world the dental art emerged as a division of the medical cult and for centuries its practice was regarded as an integral part of the physicians' art. As men grew in intelligence the mind intuitively turned toward the Great Light and the worship of deities ushered in the "theological age" which had such a profound influence on the trend of civilization including the progress and development of medical science. During this period the practice of healing was in the hands of priests who represented themselves as emissaries of the gods and who acted as mediaries between them and those suffering from physical ailments. Bodily ills were interpreted as manifestations of displeasure of the deities with the suffering individual. Interpretation of etiological factors, prognosis and treatment of disease were hopelessly bound up with superstition and ignorance and were treated principally by invoking the aid of the gods.

Through the accumulation of knowledge recorded by priests in their ministrations there developed an empirical system of medicine which was the primitive art in which we are today interested. This was the beginning of empiricism in health service which has persisted down through the ages, a vestige of which remains to this day alike in medicine and dentistry. Through the early centuries of the ancient civilizations knowledge developed as men responded to the inexplicable human urge for intellectual adventure and exploration—that necessary stimulus to discovery. As time passed and information increased, early philosophers devoted themselves to a study of fundamental principles in medicine, a harmony of thought appeared and medical and dental art began to assume a quasi-scientific standard. A great stimulus to advancing science in medicine appeared with the splendid interpretations of lay and sacerdotal medicine by Hippocrates of Greece about 490 B.C. So profound was this contribution it earned for its author the immortal honor of the "Father of Medicine," and marked the beginning of the "scientific epoch" in medical history. Other important interpretations were made by Galen of Rome, 130-201 A.D. and Avacenna, an Arabian physician, 980-1307 A.D., which to a degree were amplifications of the Hippocratic canon. These interpretations were accepted as the basis of all medical teaching and were applied in the medical schools of the early universities, continuing to exercise a definite influence on medical education even to the present.

One would conclude that the advent of science in medicine would soon reform all practice and place the physicians' and dentists' art on a rational basis. But such was not yet to be. The science of medicine at once became the object of philosophical investigation, and soon became the property of the "intellectuals" which widened the gap between the science of medicine and the art of practice. The "intellectual" has always prided himself upon his interest in "principles" for their own sake and even to this day to qualify as a pure "intellectual" one must foreswear any interest in practical applications. The science of medicine was for centuries accepted as an essential part of philosophical study and later university discipline but the physicians' art had no part in the scheme of medical education nor was it correlated as a means of improving the physicians' art. Clinical application of medical science was left almost exclusively to the guild of surgeons which had developed among lay healers, Roman gymnasts and barbers. Pupils were apprenticed to masters of this guild and in this capacity developed the physicians' art of practice. Due to the growth of medical science along an independent course and the improvement of the physicians' art along another, yet each tending toward the other, it was but natural that the scientists and practitioners would ultimately come into conflict which occurred in the eighteenth century when demonstration methods of instruction were introduced and clinical practice made a part of the medical curriculum, producing a harmony between medical science and the physicians' art. While this change tended to improve conditions it at the same time stimulated empiricism because of meager educational facilities and lack of regulation and control in practice.

Through a long period of evolution dentistry was included in the surgeon's program and developed as a part of his art in response to human demands. This development slowly improved the scientific approach to efficient oral treatment. During ancient times and almost all the mediaeval period the science of dentistry received valuable contributions from many learned men who elected to pursue this specialty of medicine. A study of these contributions will show that they were the outgrowth of discoveries and applications of the surgeons, especially that small number interested in oral lesions, rather than medically trained physicians. While there had ever been a tendency for dentistry to branch off as a specialty of medicine, as it existed in ancient Egypt, it was not until about the fourteenth century that so called scientific dentistry diverged into a specialty recognized by the physician and surgeon.

From the time of Abulcasis (eleventh century of our era) until the advent of Guy de Chauliac (fourteenth century) history reveals but little progress in the art of dentistry, yet a change in the attitude toward its practice was quite impressive. Abulcasis proclaimed against the barbers extracting teeth, contending such practice should be in the hands of the surgeons, while Guy de Chauliac readily admitted the need for the specialist. Guerini refers to this important recognition of the dentist by the latter as follows: "Before speaking of the special methods of cure of single dental affections, Guy observed that operations on the teeth are *paticular* (proper) to barbers and to 'dentatores' to whom doctors have abandoned them."^{*} So far as we are informed this was the earliest recognition of dental autonomy as we know it. While this reference to sepecialists seems to imply that dentistry was controlled by the incompetent class known as barbers the further history of the specialty shows that many capable and highly esteemed men engaged in this calling. Horace H. Hayden referred to them as follows: "In most foreign countries, those who have directed their attention to the study and practice of this branch of medicine are known as such by the medical faculty, and have been recognized under the legitimate and appropriate title of dental surgeon. Those whose diligent attention and talents were devoted to the acquirement of a correct and critical knowledge, as well of physiology and pathology, as of practical operations, were considered by the faculty of medical practiciens, as cultivators in the same field and whose opinions upon professional points were entitled to the most respectful deference and whose skill was, in many cases considered as essentially necessary as that of the general surgeon or physician."[†]

Pierre Fauchard is regarded as the founder of modern scientific dentistry. He lived and worked during the first half of the eighteenth century. He carefully analyzed the field of oral surgery and systematized its practice along scientific lines. He wrote fully from his scientific knowledge and experience giving to the profession his contributions in two volumes in which he fully and completely dis-

*American Journal Dental Science, First Series, Vol. II, page 9-15.

†Guerini, History of Dentistry.

cussed the science and art of dentistry with numerous references to unfavorable existing conditions then appertaining to the practice of dentistry. In one he suggests, we believe for the first time, the necessity for a special system of education for the dentist; he also referred to licenses then granted candidates to practice dentistry in France and in view of the fact that such examinations were in the hands of medical men suggested the advisability of adding a dentist to such examining boards, a further recognition of the specialty of dentistry. These volumes on scientific dentistry were of great value as an educational opportunity and rank Fauchard as one of the greatest of all influences in the development of dental science.

Following Fauchard came a long list of contributors who gave a literature which has been invaluable aids to education in the early years of professional dentistry. Notable among these were Bourdet, Bunon, and Jourdain of France, Blake, Fox, and John Hunter of England, the latter having made the greatest contribution to this time in his "Natural History of the Human Teeth," in 1771 and his "Practical Treatise on the Diseases of the Teeth," in 1778. Fox is reputed to have offered a series of lectures on dentistry to the medical class of Guys Hospital, London, in the closing years of the eighteenth century and to have published them in the early years of the nineteenth century.

At the beginning of the nineteenth century we find a condition of unusual interest in the character of oral service offered the public. The influence of centuries of empiricism and the unbridled gainful opportunities in this field invited incompetents to engage in dental practice while the ever increasing desire for greed was becoming a potential factor in deprecating the profession in public esteem. Disregard for the need of dental service by medical practitioners who went so far as to assume an attitude of disdain, further deprecated the practice of dentistry in the opinion of the public. A vivid description of these conditions may be found in an address by a pioneer American surgeon, Dr. S. P. Hullihen. I quote as follows:

"Until within the last ten years—until the establishment of this College—the Dental profession was looked upon as a *trade*, and its practitioners as mere mechanics; while gentlemen who devoted themselves to the treatment of the eye, the ear or skin, took rank at once with the physician or general surgeon. On what ground was this distinction predicated? By what authority was it sanctioned, and by whom promulgated? A disgraceful ignorance of medical science among the Dental practitioners was the groundwork. The medical faculty were the willing accusers, and the untiring persecutors. They condemned, without stint, a calling they knew not how to practice, and a practice they knew not how to improve. Such of the faculty as were learned in their profession, were found always competent and fully prepared, to be Oculists, Aurists, or Lithotomists, or to devote themselves to any other branch of the profession which their interest, inclination, or talents might determine, except that of Dental Surgery. This branch seemed to require something more than medical knowledge. It required great mechanical skill—'an education of the hand as well as of the head.' A kind of education

they had not received, and knew not where to acquire and yet affected to despise. The necessities of the community cried aloud to them for help—a help which they could not bestow. This drove many sufferers to seek dental aid out of the medical profession, and to obtain that help which mechanical genius alone could supply. At this the profession seemed mortified and chagrined, and loudly mocked at those who dared to supply their delinquencies; and united as one man in deriding the uneducated Dental mechanic. They first, created the necessity for an empiric, and then croaked forth their withering contempt on the creature their own ignorance had made. Thus was the science of Dental Surgery neglected, and thus abused, and thus did it fall low down in the very depths of general disrepute.*

Let it be observed that there were great and good men in this period but as Hullihen said, "It is true, there were some noble exceptions—some proud examples of individual effort, of individual enterprise—of great talents and industry, bestowed, in every age, upon the almost hopeless work of improving the Dental profession. Yet the labor of such worthies served but little more than to raise themselves monuments of greatness for after generations to honor and admire." This was the picture of a condition that had been centuries in growing.

Dr. Hullihen goes on to point out that the solution to this revolting condition was to be found in a plan for teaching both the science and art of dentistry, to combine in the same person a thorough medical education and mechanical training. The one who first urged such a union of medical science and mechanical skill under proper educational opportunities and who labored so diligently in accomplishing his purpose, was that distinguished American dentist, Horace H. Hayden. In entering upon the practice of dentistry, Hayden, complying with his belief in the values of education, wisely mastered the medical sciences preliminary to engaging in what he regarded an important specialty of medicine. He believed that if dentistry were ever established in the esteem of the public it would be when it commanded such esteem by the scientific attainments of those engaged in its practice. Due to his high professional ideals and unusual scientific attainments, he took equal rank and was warmly welcomed by those members of the medical profession and the most learned men of all vocations whom he contacted in Baltimore where he practiced for upwards of forty years. The Maryland law governing the practice of medicine recognized dentistry which was legally interpreted as a specialty of medicine and in 1810 Hayden received a license, the first in America, to practice dentistry. This license was granted by the Medical Examining Board of the Medical and Chirurgical Faculty of Maryland. In 1816 he made the first effort to organize dentistry into an association for mutual benefit and continued these efforts until his dreams were realized in 1840. From his arrival in Baltimore about 1800 he engaged in teaching those who sought his instruction, until 1821 when he began lectures on

*Address before the graduating class, Baltimore College of Dental Surgery, 1850, S. P. Hullihen.

dentistry to medical students in the school of Medicine, University of Maryland, continuing uninterruptedly, it is believed, until 1825 when discord and dissension precipitated a legal battle between the Regents of the University of Maryland and a newly created Board of Trustees, which caused an interruption to these lectures. This was the first effort at dental teaching in America and was the beginning of that struggle for dental educational opportunities which culminated in founding the Baltimore College of Dental Surgery. This legal fight between the Regents and Trustees was carried on until 1837 when the Board of Regents had their rights restored in a ruling by the Supreme Court of the State of Maryland at which time the Regents regained control of the University and it is said Hayden resumed his lectures. The University of Maryland was exhausted by this long legal battle, as shown by a reduction in enrollment from over *four hundred* students in 1825 to *eighteen* in 1839. Due to these conditions it was but reasonable to expect the rejection of a request to create a chair of dental practice in the Faculty of Physic, University of Maryland. But the need for some system of training that would offer opportunity to those seeking to enter the dental profession had been recognized and the desire to provide it was not to be denied and in response to this great yearning the Baltimore College of Dental Surgery was chartered February 1, 1840. Shortly before this event the American Journal of Dental Science was founded as the first dental periodical in all history. In the summer of 1840 the American Society of Dental Surgeons was organized. Dental periodic literature, organized dental education and organized professional interest simultaneously appeared, combining to usher in a new age in dentistry. Dental literature has multiplied by leaps and bounds, dental education has progressed in a most satisfactory fashion, while organized dentistry as a means of self improvement to the practitioner has been an invaluable aid and is indispensable. Today we have a vast store of information reposing in our accumulated literature. There are thirty-eight dental schools in the United States and many others in all civilized countries contributing to the onward march of dental art and science; dental organizations rank from the International Dental Congress to national organizations in various countries, the most important and impressive being the American Dental Association; societies are formed in each of our states, various districts in most states, city organizations on down to the small study groups of which there are myriads. In addition, practically all countries and *all* our states have licensing boards designed to protect the public through legal restraints. Truly the progress and attainments of the dental profession have been marvelous! All of these functions are directly educational or aids to the educational program in which all of us are interested.

While dental educational institutions increased in numbers and improved in usefulness from the organization of the first college down through the years to the present, this progress was beset by many difficulties and discouraging elements. For many years after the founding of our professional independence some of the evils of our empirical system of dental training persisted and found fruitful

employment in the new epoch. The most devastating factor was and still is the facile adaptation of the art of dentistry, even in educational institutions, to the purpose of exploitation. This fact was responsible for the appearance of a number of proprietary dental colleges which sprang up without even reasonable claims to a semblance of pedagogical merit but which could be regarded as good business ventures on the part of promoters. Such institutions exercised an unfavorable influence upon the quality of professional attainment of those receiving training for work in an important branch of health service and resulted in an injury to the cause which still appreciably afflicts the profession. For almost forty years after the founding of the first college there was a pronounced conflict of ideas between the old and the new. Altruism and rationalism which had ushered in a new era were striving to move onward and upward; selfishness and empiricism were the forces which retarded progress, persisting in carrying on, growing weaker it is true but continuing to exercise a baneful influence. During the greater part of this period of time there were no affiliations of dental educational institutions nor any independent authoritative body to fix standards to which dental education should conform. The various schools designed their particular curriculi without regard to any standard of requirements and set up their individual standards of education, quite alike in main purposes but so varied in administration and with such elasticity in ethics that the profession could not be looked upon as recognizing a reputable standard of education or system of instruction. There were but few states in which legal restraints designed to regulate the practice of dentistry existed which by virtue of their requirements for admission to practice tended to improve education.

In the early eighties some of the dental schools of the United States and the state boards of the various states formed national organizations designed to improve the quality of training of those anticipating the practice of dentistry. The result of these efforts was quite fruitful and under these influences we find dental education making substantial progress. Then came two important developments that were to result in the most valuable improvements since the founding of organized dental education. The first of these was the advent of the Dental Educational Council of America which has had such a profound influence on the improvement of dental education. This body made its appearance in 1910. The council was composed of five members each from the National Dental Association, the National Association of Dental Examiners and the National Association of Dental Faculties. The object of which, in the words of Dr. Burton Lee Thorpe, the President of the N. D. A., "is the advancement of dental education and the unifying of the standards of the various national bodies of the dental profession; to inspect the various colleges under their jurisdiction with a view of ascertaining the character of the work done, and whether the needs of the community in which colleges exist are fully satisfied; to perfect a model curriculum and make a study of the existing dental laws of the various states, and present a report on the possibilities of more uniform dental laws." In its early years the Council encountered

many difficulties in its efforts to secure a semblance of uniformity in educational standards. As time went on the profession became aware of the necessity for standardization of educational functions and through the persistent efforts of the Council, minimum requirements for admission, courses of instruction both as to length of time and relation of subjects, improvement in instruction and increase in facilities for clinical teaching were given form. This was not the work of a day but by devoted study, patient and persistent effort in the face of many prejudices, the influence of this body has contributed more to professional progress and improvement than any other single factor in our modern history unless it be the founding of a college, a literature and an association of dentists as the beginning of professional dentistry. The second great influence on standardization and the emancipation of dental education from unfavorable influences was the study of dental education in the United States and Canada and the report on this study made by the Carnegie Foundation in 1926. This has been and will continue to be regarded as of inestimable value. It has gone into the privacy of all the schools and brought forth and given publicity to conditions that while in some instances was embarrassing, it has been correspondingly beneficial. It has revealed dental education to the public and acquainted it with itself. In revealing certain weaknesses, strength has been instituted that offers to carry dental education to heights hardly dreamed of before. The report has without fear or favor given the world facts as they exist in dental educational institutions of the United States and Canada and by so doing, has directed the attention of competent educational authorities to the claim of dental education in a manner that tends to permanently establish it in the scheme of higher education. There seems every reason to believe that it will influence the removal of the last remains of the selfish and depressing influences over dental education which have persisted through the ages down to the present.

The aims of dental education are revealed in the object for which it was instituted, namely, to produce men with expert knowledge in a special field that they may be capable of satisfactorily and successfully meeting an important health demand: to maintain the profession in a healthy and progressive state; and to add to the store of knowledge by intelligent attention to scientific investigation and improvements in the dental art. These objects may be attained in a telling manner only under conditions that guarantee quality in the product. Certain fixed policies should be followed to secure satisfactory results in our system of education. First, the admission of young men to study who possess to a high degree those natural qualities which, when developed, will make them fully capable of discharging the important duties implied in the demands on the profession. This individual must present evidence of his scholastic capacity as attested by previous educational refinements, to the point that he shall fully meet the recognized minimum requirements for admission to study, and shall have shown by such intellectual effort a mental capacity of average high order. The time is past when men find entree to dental educational opportunities through a vague

desire "to be a dentist" or because they are "mechanically inclined." Dentistry is, or should be, a learned profession and only those should be admitted to it who can present evidence of capacity to acquire useful knowledge and who possess talent that will develop into skill, both motor and intellectual, and finally but not least of all, those who display a tendency to acquire the right ideals in life which will dominate behavior in professional relations. It is possible and perhaps desirable to go further than the recorded facts of pre-dental scholastic records to search for evidence that will establish the claims of the candidate to a professional educational opportunity. It may be necessary to demand scientific tests of his intellectual and mechanical abilities. Such measurements are employed in some professional schools and in the near future we will have valuable data available to guide all schools in this important and far reaching venture. If, after admission the student demonstrates reasonable capacity in the intellectual requirements, and creative ability in co-ordination of knowledge and skill, his future success may be regarded as promising and he may progress through the years to the profession which he anticipates. This selection of students for admission and the elimination through refusals to promote those who prove themselves unfit is the safeguard dental education can throw about the future. All professions have too many misfits and it is the inferior individual that the group is too often judged by. Dentistry must meet its solemn duty to the public and guarantee its future by carefully selecting those who are best qualified by nature and training to practice our specialty.

Second, the type and quality of dental teaching must be further improved. This is at once the most important and most difficult task in dental education. In the progress of dental education, this important factor has received much attention by school administrators to the end of significant improvement. It is almost impossible to secure an instructor who possesses the requisite combined professional knowledge and pedagogical training. Billroth says, "The only way to develop (in medicine) capable university teachers is to secure the most scientifically important men for the chairs and give them their opportunity."^{*} The problem is to find instructors who combine both a scientific and practical knowledge and who possess a modicum of pedagogical instinct, who may with these elemental requirements give themselves their opportunity. The successful teacher must direct his efforts to develop independence of thought and action in the student. It has been said "Education is the acquisition of the art of the utilization of knowledge" and the student must be taught that he should acquire knowledge but most of all acquire the art of its utilization. To teach facts, to create the monstrous spectacle of a mentality partitioned off and pigeon-holed to retain so many facts and so much data is the most gruesome educational ideal. Again, education should be directed along lines to develop in the student the habit of study and investigation, and, in addition, to instill in him a desire for further self education

*Billroth—"The Medical Science in the German Universities."

that he may in the years to come grow in intellectual strength and scientific attainments. We must not forget that an educational system never can develop a finished product. All that dental education aims to do is to give fundamentals and prepare the novice to "commence." A dash of inspiration to flavor our bulk of information will stimulate to greater efforts, and aid to eliminate that unfortunate condition of self-satisfaction so prevalently the cause of our disinterested fellow practitioners, and what is more, will do much to efface that last vestige of empiricism which still haunts our profession.

In determining what shall be included in the dental curriculum it is necessary to fix a time adequate to completing the education of candidates. This time is in part regulated by economic factors but has been governed, to an appreciable degree, by the amount of subject material to be offered in a curriculum to adequately equip the student in the fundamentals of medical and dental science, and to train him in rudimentary principles of the dental art. Since the factors involved in fixing a minimum time for the course are relative and have been argued from arbitrary premises, there is some justification for failure on the part of organized dentistry to adopt a uniform plan of education. Experience in the study of dental education by competent members of the profession suggests five years after high school as the minimum time, but favors additional time requirements which any dental school finds possible and desirable. The minimum time can be determined in but one way and that is found in the answer to the question, what shall be the qualifications of one to *begin* the practice of dentistry and how long will it take to produce such an agent? If the answer is determined by the required time necessary to instruct the student in the fundamentals of professional knowledge and art, the courses to be offered must be arranged to harmonize with the time schedule. The pre-dental course of study may be regarded first as cultural, or subjects that tend to improve intellectual refinements, and second as utilitarian or those presenting fundamental knowledge prerequisite to the study of the physical, medical, and ancillary sciences, upon which the art of dentistry must be superimposed; and second, the professional curriculum which includes the aforementioned sciences and the practical application of scientific knowledge toward the development of the art of practice. Cultural subjects may be arranged in a pre-dental requirement or they may be in part pre-dental and in part included in the professional schedule. In any case the total of the cultural and the professional requirements must be provided for under a time arrangement, to be known as the minimum requirement for completing the course. All proposals for a solution of this problem should be to the end of better professional service. In any arrangement we should not yield to the pedantry of culture, or the desire for knowledge that may be displayed rather than used, that has so forcefully tended to sway us. Professional education must determine what information is most worthwhile and forego that refinement whose sole claim is embellishment for appearance sake that our vanity may be satisfied. Not only is the time

requirement of the dental course a question for debate but the apportionment of time to so called cultural demands and professional requirements remains undecided. The present variance in opinion is not operating to the advantage of the profession. Dental education must solve this problem to the point where minimum time requirements will have similar plans and comparable apportionment of time between the cultural and professional subjects. The arguments pertaining to these differences have no place here but the profession should realize the difficulty, grasp the situation and having formed an intelligent opinion, use its influence to bring about a proper standardization in this important educational relation.

The third important factor in professional education is purely economic. We allude to the source of income necessary to carry on the important function of educating a group to perform a service to the public. Such support may be derived from the fees of students and profits from clinics, from endowments, from appropriation of public funds, or a combination of the three. It has been conclusively proven that no form of education can be made self-supporting because if the student is taxed to satisfactorily support adequate physical facilities, equipment, and instruction, the financial load will be so heavy that education under such a system will be prohibitive. The former policy of dental education which depended upon fees for maintenance was so unsatisfactory that proprietary dental schools were required to make changes when obliged to meet higher standards. When obtainable, endowments are the most reliable and satisfactory sources of revenue, but all institutions are not so blessed as to enjoy this fortunate position of endowment aid. In the absence of endowments dental education becomes the responsibility of the state and should receive adequate maintenance comparable to that awarded other agencies upon which the public depends. The state will respond to the appeal for aid as soon as dentistry intelligently presents its case which must reveal a public-spirited unselfishness responding to the appeals of suffering humanity. All functions of our educational system cannot look for full state support. Such features as research, graduate and post-graduate demands, libraries and the perpetuation of the traditions of dentistry in museums and with memorials should be endowed. Not only should there be endowments to care for these important elements but such endowments *should come mainly from the profession*. Every man owes something to his profession and a part of one's wealth set aside to aid in perpetuating the profession to which one has devoted a long life of service is a worthy monument to the memory of any dentist. No greater problem confronts dentistry today than the question of maintenance of its educational institutions. It is unreasonable to assume that student fees can satisfy or that state aid can possibly appropriate to the fullest need, but with the addition to these of a reasonable endowment from philanthropic dentists and laymen the cause of dentistry may be amply provided for.

In closing we would like permission to address a few remarks to certain zealous influences which seem dissatisfied with the present attainments of the profession and who propose to revolutionize

dentistry by merging it with conventional medicine. We introduce this thought because it is a problem for the profession to decide. The future relation of dental education to conventional medicine is to a degree engaging the attention of the dental world with some interest manifested by a very limited few medical friends. Shall dentistry continue as an autonomous division of health service or shall it be merged with medicine, making of it an accredited specialty of medicine? This question should be answered with only the best interest of the public in mind. The fundamental principles involved in medical science are essential to the educated dentist and in addition the ancillary sciences are imposed upon the dental profession as bio-mechanical factors intrinsically a part of dental art. Both the medical and dental arts depend for success upon a thorough understanding of the physical and biological sciences. The physicians' art, based on these sciences, has developed in one direction, the dentists' art, influenced by the bio-mechanical factors, while based upon these sciences has in the very nature of the problems confronting the dentist developed independently. They have run parallel and have established some contacts of mutual value, but in the main are quite independent.

It may be admitted that they should be brought in closer harmony and better coördinated in the interest of the public. Mastery of neither *art* is necessary to the successful performance of the other, but a knowledge of the physical and biological sciences are essential to both. Without going into too much detail we propose that a thorough training in the physicians' art is *not* necessary to a competent and scientific service which dentistry is asked to render the public. The philosophy of both dentistry and medicine testifies to this conclusion. That dentistry has in some respects failed in its objective is no argument for a realignment but rather a proof that greater attention should be directed to the physical and biological sciences as a necessary background to higher standards in dentistry. This program should be supplemented by an effort to secure a change of ideals both in medicine and dentistry that a more sympathetic understanding between these health services be established to the end of a more complete and satisfactory public service. Those in the main who deprecate the capacities and abilities of the modern dentist to serve the public in terms of scientific demands, or who look upon dentistry in a superior way as if to say, "Oh, Lord I thank thee that I am not as other men," both in and out of the profession are those who themselves lack an understanding of the true ideals and potential capacities of our profession. These iconoclasts argue along lines of alleged deficiencies to be observed in dental education and practice and are wont to compare the best there is in medicine to the worst there is in dentistry, looking upon such comparison as proof that their theories must be accepted. So far as our information goes compelling proof of the desirability of such a change is sadly lacking. I shall leave this question by quoting from the writings of Chapin A. Harris, a *medically* trained dentist: "Whenever, therefore, I hear a person say, that none except graduates in medicine are competent to discharge the duties of practitioner of dental surgery, I at once take it for granted that he himself is either ignorant of the pro-

fession, or wilfully intends to deceive, and in which case, I can regard him in no other light than as an imposter and empiric."*

Let us repeat, "The present contains all that there is." Our store of professional information represents a community of knowledge that has been age long in accumulating. But it is not a perfect picture; much is to be added year by year if we would live on into the future. We are confronted with many problems seemingly as important and formidable as any age has known. We must not overlook the fact that each age has had its problems and the future will bring to each succeeding generation tasks that will sustain professional interest and stimulate action, certainly equal to what we have known. We should approach our task with open mindedness and a desire for truth that will secure advantages to the present and insure greater success in our enterprise in generations to come. Selfish treatment of questions of principle does not possess even transient values and is as futile as it is foolish. Let us then give careful thought to an analysis of our status and when its weaknesses are revealed, honestly endeavor to permanently correct and improve unfavorable conditions in a manner salutary to both the present and future.

President Jones:

I am sure that we all appreciated this very able and complete presentation of the subject of dental education by Dr. Robinson, and at this time I want to open this paper for discussion. I might add right here that we have some visitors with us and I want to extend the invitation to those visitors to enter into our scientific discussions.

Dr. Burns, Atlanta, Georgia:

Mr. President, I am not at all surprised to hear such a splendid paper by my good friend Dr. Robinson. If you men knew him as intimately as I do, and had known him as long and as well, you would not be anything but prepared for such a splendid paper, and I use the next word advisedly, classic. I am frank to say that I don't rise to heights like this very often. Dr. Robinson has brought us the light on this occasion and this history should go down in the light of dentistry. His work shows that he has spent time and energy on the preparation of this paper. In addition to that, however, he has added what is most valuable, a practical application of that history, which I feel is most valuable.

It probably would be out of place to discuss this paper at length, because the essayist entered with an apology for the length of his own paper; furthermore, then, those who discuss

*American Journal Dental Science, 1st Series, Vol. I, page 52.

his paper I think should recognize that observation and be as brief as possible.

I made several notes as he went along, expecting to refer to them, but I believe in the interest of time it would be in good taste to cut those short. He referred particularly in the early part of his paper to the divorce, as it were, of the science and art of both dentistry and medicine and said that those who observed the science thought it encumbent upon them to endorse worldly art.

I think that is a broad interpretation. I do not and cannot help but feel that he was expressing what might be held in the sentiment that I heard not long ago in the definition of a "high brow"; that is, a high brow is one educated beyond his intelligence. So that some of us educators feel that when we get into the class of educators, if we so compliment ourselves, we should be divorced from those almost lower scales of education that Dr. Robinson referred to as the utilitarian features.

I was particularly glad of Dr. Robinson's references to the early Americans: Dr. Hullihen, Dr. Horace H. Hayden, and Dr. Chapin A. Harris, the latter two particularly, associated with their splendid instruction which Dr. Robinson represents.

Dr. Robinson also took a very practical view of judging an instruction by its products, for after all that is the measure by which the public is going to judge the instructions. And yet that should not be the object of any instruction which is educationally inclined, else we might descend to that plane of educating our students, preparing them more properly to pass state boards by a system of quizzes and such methods. Possibly you don't know it, but there were schools which operated upon that plane.

Dr. Robinson also referred to the splendid work of the Educational Council of America. He also referred to his relations with that body. Well, he is not alone in that, most every school in the country had its bouts. I want to say for Dr. Robinson, however, that he came off splendidly marked and not scarred. The Dental Educational Council made a lot of institutions really educational institutions, which before were, well they were plants, they were turning out products.

Dr. Robinson referred to the fact that in 1840 the first school was started, really in 1839 I believe, around that date. In a very short time fifty-seven schools had developed in this coun-

try. Think of that now! They must have thought it was a good thing. After the Educational Council went to work, there was a devastation in the ranks of dental institutions—I hesitate to call them schools. They operated under such insignia and classifications. Until now there are thirty-eight, and the heads are still dropping in the basket. So that the work of the Educational Council cannot be too greatly praised.

Particularly was I pleased with Dr. Robinson's position about the anatomy of dentistry. There is a certain amount of pride in my attitude, which I think probably humbly speaking is forgivable, because if we didn't have pride we wouldn't get very far in life. If you don't respect yourself, why you can't expect other people to respect you; and I suspect that a whole lot of us right down in our hearts rather resent the slap in the face, figuratively speaking, that our young profession got or received back in 1839, when Chapin A. Harris tried to have medicine recognize dentistry by establishing a school in medicine. We had gotten along pretty well by ourselves, and I expect there is a certain amount of resentment that now there are schools of thought over the country which use the expression—I do not—that dentistry is selling out to medicine. That is the common term in these educational circles. I am sure Dr. Robinson recognizes that. I don't like the term, but I simply give it to you to show the attitude of some resentful schools of thought.

We have our problems, which I am just personally, professionally and educationally proud enough to feel that we can solve. I may be wrong. Sometimes even when educated we make mistakes. But I do feel seriously that this is a problem which is confronting dentistry today and which we should give very, very serious thought to. We should not be led by the opinions of others, but we should think it out for ourselves. I, however, have undying faith in the intelligence—let me repeat that again—in the intelligence of the dental profession to solve their own problems. I have no sympathy with the dentist who goes along with an inferiority complex and says, "Well, medicine doesn't recognize us, don't recognize me." Why doesn't it? Usually the fault is in yourself. Those of us who conduct ourselves in a manner which will entitle us to the respect of the medical profession, or any other profession, usually receive that respect. And I think if we would look within ourselves we would probably find the secret of our non-acceptance.

In closing I want to again thank Dr. Robinson for this splendid paper. I should like to have the product when it appears in print, I hope it will, to study more carefully. There is a fund of information in it, a fund of historical value, some of which has never been published before, and that is a real contribution and the North Carolina Dental Society should be proud of the fact that Dr. Robinson has come here and given us something really original even if it is history. I thank you. (Applause.)

President Jones:

Are there other discussions?

Dr. Robert H. Jones, Winston-Salem:

Mr. Chairman, I want to add my testimony to that fine paper. I have been a student of dentistry forty-four years, and from the organization of this Society we have discussed those things. It is a privilege and a pleasure to have listened to your paper, Sir, and I want to congratulate the gentleman. Before I got up, I went to shake his hand, but I want to do this publicly as being one of the finest papers I have ever heard. And I hope we can all read it over and think over it.

In the early days of our profession we thought of the advancement of dentistry, we discussed those things; and we didn't know sometimes what was best, whether dentistry should go on its course as it started and improve itself, or whether it was best for every dentist to have a medical education. And one time in my life I decided if it were convenient I would like to get to some city where there was a medical college and that I would take a medical course. I believe it's best for us to know all that can be known on any subject; but now, taking the utilitarian view of it, whether it's the best for a dentist to know all about medicine before he practices, is another proposition. We see men today that are well skilled in the profession of dentistry that know very little about medicine. But sometimes I think in my observation and in my practice if I knew more about medicine I would be better able to treat my patients and to know what to do for them and know whether to refer them to a physician or continue as I was doing trying to remedy the evil myself, in my profession.

It is a question in my mind today, whether we should have further knowledge of medicine, or whether we should go along

as we have, and results show that we have advanced wonderfully in dentistry, when we come to think of it, wonderfully, and we have done it by weeding our row, and I don't know yet but what that is best.

I have certainly enjoyed this paper. It was fine and every dentist should familiarize himself with the history of his profession and with that of medicine also, because in a certain sense they are interwoven one with the other. I wish very much that every dentist in the State could read that paper, and would think over these things. It is best for us to try to go along and improve ourselves in every way that we can, and it is a great pleasure for me today to look over this body of men here, when we started out with fourteen, which was our starting point, and see what a great improvement has been made. Many dentists today really don't know what privileges they have. When we started out in dentistry we had no teachers in all these numerous things such as bridgework, etc. We had to pick it up. Today we have got every advantage almost to be thought of for the practice of medicine and the study of medicine. We don't appreciate the opportunities, young gentlemen, if you don't give it thought in that way. Thank you very much. (Much applause.)

Dr. J. N. Johnson, Goldsboro:

I am glad to have the pleasure of listening to this history of the dental profession. Often I turn to Barton Fleming's publications, reading from 1875 to 1897, just to have the pleasure of looking at the original keystone of dentistry, I mean the men that made it. And I will say that beginning with Dr. Arrington, Dr. Jones, and the two Evans, and Simpson, you won't find finer faces anywhere in the world. Now, just to look at Dr. Jones is a benediction, and to know him is a contribution to character.

Now I want to tell you, education has made dentistry. I can look back forty-two years and hear that man say, I read it long ago, and Dr. Jones says it also, to leave the systemic treatment to the physician. And I tell you gentlemen, be darned if he wasn't right about it at that time. And even now we have our classification and we know a great deal. Why? Because we have had the opportunity of education, and our basic educational principles are just as high as medicine. And we are making an organization that is going to stand flat-

footed with medicine. Now it's so much to dentistry and it's so much to medicine, and it's too much for us all to try to be physicians and dentists. That is what I think. If any man wants to specialize in any particular branch and if he wants just a little more education and if he has got time enough to put ten years into his education instead of six, why then he is just that much better fitted to practice; but he is not any better dentist than if he had followed out the present dental course. And it's growing every day. Why our teachers are thinking, and our profession is thinking, and when we listen to a paper it's one thing that impressed me this morning, was how keenly you men listened to this highly technical paper. We have our own ideas about this thing, but I just wanted to bring out that proposition, of how we stand, the medical and dental professions.

I enjoyed your paper. (Applause.)

President Jones:

I have no desire to stifle any tribute that this Society would pay to Dr. Robinson for this wonderful presentation this morning, but time is getting short and we must move along. So I am going to ask Dr. Robinson at this time to close the discussion, and before Dr. Robinson does close this discussion, I would like for this Society to give him a rising vote of thanks for his paper. (All rise, much applause.)

Dr. J. Ben Robinson, Baltimore:

Mr. President, I want to thank this Society and these distinguished gentlemen for their consideration. And I want to apologize to you for having taken up so much of your time here. (Much applause.)

President Jones:

Before having our next speaker introduced, there are one or two little matters of importance that have been brought to my attention that should be considered by the full assembly. And at this time I am going to recognize Dr. John Wheeler who has a little matter that he wants to present in a brief way.

Dr. John H. Wheeler, Greensboro:

Mr. President, what I have to say is really something that should have been brought up at one of the earlier sessions when practically all the membership was present, because it vitally concerns every member of the North Carolina Dental Society.

However, this can be taken up at our district societies. It concerns the dental relief fund. When Dr. Watkins gave me the figures this morning I was absolutely amazed and ashamed to report, but I must do it. For the year 1930 North Carolina averaged fifteen cents a member.

Now, if you don't know what I am talking about I will tell you. Every year, just before Christmas, you get one hundred seals and you are asked to return a dollar. We have averaged returning fifteen cents. Now, do you know where that dollar goes, what it goes for? They are not just simply trying to get you to put a dollar into the treasury of the American Dental Society, but they are trying to get you to put a dollar or more, and the most of us ought to put more money in the dental relief fund. Now what does that dental relief fund mean? That means if you get knocked out with illness, and you can't support your family it takes care of you. And I can name one man here today that will give you another viewpoint, a man who has been president and one of the best presidents of the American Dental Society that it has ever had, and but for this dental relief fund would have had to have gone to the alms house if the dental relief fund hadn't kept him out of it.

Now, if you have been a member of your Society for five consecutive years and then if you do not think enough of it to stay any longer and withdraw, if you get incapacitated, completely knocked out, the object of charity so to speak, then the dental relief fund of the American Dental Society will come to your aid and help you. That is what it means. How many rich dentists do you know? How many members of the North Carolina Dental Society today, if you were knocked down by an automobile, incapacitated or killed, whose family would be dependent so far as the necessities of life are concerned? Now, that is what the Society is doing with this fund. That is what this national dental relief fund of the American Dental Society means, it is piling up or building up a fund there to take care of you and me and the others in our old age or when we are incapacitated by sickness.

Now I think that if Dr. Watkins, who I think handles this fund in the State, will send to the secretary of each district society and have this matter presented to these district societies, that we can get more done. And I hope the program committee will put it on one of the early programs in 1931 and get this

before us and keep it before us, so that North Carolina will go from fifteen cents to a dollar or a dollar and a half a member, or even two dollars a member. What is a dollar a year? What is two dollars a year? When I may be the man or you may be the man who is going to need a hundred dollars a month or fifty dollars a month to help keep us out of the poor house.

And that is just all I have to say. I just want you to think about it, and when the Christmas Seals come this next year, don't let them get covered up with a lot of other things, but send in your dollar, or make it two dollars, and if you are prosperous make it ten dollars. I thank you. (Applause.)

President Jones:

Dr. Wheeler, I thank you for presenting that very worthy subject.

At this time I will recognize Dr. Johnson who has a matter he wants to bring before the Society. Five minutes, John!

Dr. J. N. Johnson, Goldsboro:

Last night I let Dr. Hunt do my talking, but I am not going to let him do it this time.

I want to say something and I want you to listen to me, because it's a matter of organization. You know we recently passed a legislative act placing a dentist on the County Boards of Health. A lot of dentists have written President Paul Jones asking what salary it will pay. It doesn't pay any salary at all. It will be worthless. Not only that, but it's something for your consideration. You want to put the best man you have got in your county on that particular board. And the reason you want to put him on there is first, that he must be a good health man and health-minded, as it controls the profession and the confidence of the dentists in his county. And the next big thing is this: that board is constituted of the chairman of the Board of Commissioners, the Mayor of the county or town, and the Superintendent of County Education. Those three men elect two physicians and one dentist. That dentist is an absolute unit of the Health Department of that county, and that county is a unit of your State Board representation.

I have been making a survey, but as John Wheeler says a long time ago, I get my papers all covered up and forget where my things are, but I don't forget a principle that has to do with the health of the children of North Carolina. That is what

is coming up and I am not on the trail. I want to request the Society to appoint a committee to act with your representative on the State Board of Health. I want to ask that they put Dr. F. L. Hunt, Dr. E. B. Howle and Dr. Paul Jones on that committee, so I will have somebody to advise with me. Three leaders are better than one, even if one head makes more fuss than all three of them. (Laughter.) And I am asking you to do this for the simple reason that I think it would be for the best interest of our organization in the arguments that may take place as to what dentistry deserves and what she is going to have, if J. N. Johnson can get it for us. (Applause.)

Dr. J. Martin Fleming, Raleigh:

I move that that committee as reported be selected.

This motion was seconded, put by the President and carried.

President Jones:

Without taking up any more time and on behalf of the Society I would like to apologize to Dr. Souder for imposing upon him in this manner. He has a very wonderful presentation to bring before you at this time and I am going to recognize to introduce this speaker, Dr. Ralph Burns, of Atlanta.

Dr. Ralph Burns, Atlanta:

Mr. President and Members of the North Carolina Dental Society, it's a real pleasure to be able to introduce Dr. Souder. I know whereof I speak because I have heard Dr. Souder very recently. I don't want to take up a great deal of time. Dr. Souder is Chief of the Dental Laboratory, of the National Bureau of Standards, and I would bespeak for him the attention of every man here as being worth your while to stay and listen to every word he says. And I hope he will show as many slides and give you as much data as he did right recently in another city in which I heard him. It gives me great pleasure to introduce Dr. Souder at this time. (Much applause.)

Dr. Wilmer Souder, Washington, D. C.:

Mr. President, Members of the North Carolina Dental Society and Guests, I assure you that it is a pleasure to be here to talk with you for a few minutes this morning. I have thoroughly enjoyed the talks here about your problems and I have enjoyed the discussion as to the relationship existing between the medical and dental professions. There is usually a bit of time devoted

to that in this talk which I have been giving over the country for several months. Do you know that there are people who do not respect the medical profession even at this late day? I am not one of them, for when I get sick I get to the hospital as quick as I can and the longer the knife and the more they cut out the better I like it. But there are people who will not accept medical attention, there are people who will not accept surgical treatment, there are people who will not call the medical doctor under any conditions whatever. The medical profession has not gained the confidence of those people. Why? I have been reading some of the literature of the development of the medical profession and find there was a tremendous amount of experimentation and a tremendous lot of mistakes. One of the kings of England at one time had an illness that lasted less than thirty-six hours; during that period fourteen physicians attended him. They gave him twenty-one different treatments, ranging from letting blood, sixteen ounces of blood, eight ounces of blood, purging, vomiting, sneezing powder, shaving his scalp, blistering him, blistering his feet, and giving him all kinds of drinks, and if he had lasted longer perhaps they would have given him other things. That is a past for which the men of today are not responsible, it's true, but it's a past which they must live down. You people do not have a past so full of experimentation, so full of trying this and trying that. You have gotten on your feet, it's true, later than the medical profession, but you have gotten on your feet and you are standing on your feet, you are not experimenting with the public to any appreciable extent. It's true that certain people are glad to be experimented with, and they seem to enjoy experimenting, but you are coming to a more fundamental basis than ever before. I think you are a little bit too charitable in your views in relation to the public, you are accepting responsibility for failures, you are accepting responsibilities that are not your fault, you are not responsible for many of the failures in your dental service.

I can prove that to you. Twelve years ago when we were asked by the War Department to assist in selecting dental amalgam to be used in the Army. That is our first incite into the testing of dental materials. He sent out about a dozen amalgams, on the bottom of each one it said "balanced, a tooth saving material" or "a perfect material" or "the very best material." Every one of them, according to the bottle, was a

perfect material. He asked us which should he buy for the Government. The statements on the bottles indicated they were all one hundred per cent perfect, and he asked us to tell him what the difference was.

We separated them and we found that about two-thirds of those showed shrinkage when placed in the cavity according to instructions ordinarily given. We disposed of those right away. Two-thirds of those materials should cause trouble when used in the mouth. Now, if you had been using one of those types of amalgam I don't see why you should not have lost that filling, that it should have come out of the tooth. All right, if you buy such materials you do so believing what is written on the bottle and what is told you by the agent or supply house selling these materials. Were those manufacturers putting those out knowing them to be bad materials? No, I think not. They were making up and selling what they could sell and what they thought the profession liked. The profession likes an amalgam that can be rolled around in the hand for several minutes and then could be placed on the shelf and a piece of it pinched off as you need it to fill in a cavity, it was so convenient, and you could polish it with a bit of cotton and finish it up in very lovely shape. Yes, rich in tint, and shining material, that is what you people have been asking for, amalgam that was easy to use.

And as a result we sent back two or three or four amalgams that were satisfactory for use in the Army. And ever since then we have been consistently testing the materials. That was in 1919. In 1920 we published a report on our findings, showing that about two-thirds of the brands of materials supplied to the profession were effective. And you, as a member of the profession, perhaps were using a material that was not good for a year and yet agreeing to replace it for a year. Now you were assuming the responsibility there that was not your fault if that filling didn't stay in place.

But now through the coöperation of the work of Dr. Taylor and the others who are being supported by your gifts, you are having those materials rated, the amalgams now have been listed, certain ones satisfactory and certain other ones unsatisfactory. But we cannot announce publicly the different materials and the different physical properties and say certain ones are satisfactory for the profession and certain ones are not. The cheap low-grade, low-rate manufacturer will continue to

manufacture this stuff and sell it to you hoping the supply man won't catch it. So there has been another plan adopted entirely and it is to be carried out in all the work.

There is the question of efficient contraction and expansion of amalgam matter. Amalgam expands about three times as much as tooth substance when it's heated, and amalgam has to be of that requirement that it will fit the tooth when cooled, that hot drinks in the mouth will not hurt the amalgam and will not cause cavities to appear, and when cold drinks are taken into the mouth it will not cause the shrinkage and pulling away from the sides.

Now the plan that I intend to describe to you is, that Doctor Taylor and the others are carrying out, that the manufacturer will be given the opportunity to say, to guarantee, that his material complies with a specification, standard of material, a certain solidity, a certain rigidity of the material, so the contact points will not get away from you, and you can spend a certain amount of time in preparing a contact point. That is one of the hardest things in the profession, where your amalgam recedes here and food gets down through and you get bleeding gums. For that reason you must have a certain rigidity of this material. Now the suggestion has been offered the manufacturer of amalgam that he will make a guarantee of his material to comply with specifications, and I believe you people should insist on that from now on, that you will insist that the amalgam which you use will comply to specifications, that it will be at least up to that standard. That isn't new to you; when you go to buy your chloroform, or your ether, or your novocain, etc., you look on the side of the package for those three letters "U. S. P." and if it isn't U. S. P. what do you conclude? If you use a material that isn't up to standard and you have an infection resulting from it, and the patient gets hold of a cheap attorney and he is able to show that you haven't used any U. S. P. material, aren't you in for trouble? Wouldn't there be a malpractice suit brought because you had not used a standard article and because you had not used a safe article? The Medical Society has supplied you with that formula and with that safeguard of the U. S. P. Your profession right now, your Research Commission, is trying to inaugurate the same thing in your supplies that you are using.

And what I say as to amalgam follows as to the other materials, just as well. We are glad to see that it's been beneficial

to the Bureau of Standards, with the Veterans Bureau, with the Navy, and others that are using dental materials, so we are all profiting from it. We expect that in the next two years we will see a greater advance than has ever come in this problem of selecting materials.

Now we can't give you all the materials. Some people are getting impatient and they want to know what golds to use, etc. Well, we haven't been able to standardize the golds up to this time. Two weeks ago we met in Washington with the manufacturers and talked over with them questions relating to standardizing golds for inlays, and we succeeded in standardizing three golds, that is we have the tentative specifications and that will be announced to you shortly.

Now, you know there are all kinds of golds being used, some of them around 15 carat and 12 carat, and in one case it was practically a 7 carat gold. Now, if you were to make a ring out of 7 carat gold and your wife were to wear it awhile, on her finger there would be a green spot on it, and yet that gold is being used in the mouth.

Of those extremely low carats, we are trying to get a safe material for you, a safe gold, a safe amalgam, a safe impression compound, a safe investment compound, and finally a safe technique. Now I want to discuss with you a minute the difficulties in investments. You all know the steps that you use in this work, and about the cast gold, your wax, and the results you expect from your finished inlay. And, if you get that result you are surprised. You should not be. Now the one thing that has caused all this trouble is the shrinkage of the gold. That has always been with us and I suppose it's like the poor, it will always be with us. There is no gold, as far as I know, but shows shrinkage and something over one per cent shrinkage it shows when it's cast. The foundryman takes care of that, and he doesn't use a regular rule, he has a different rule of a different length, and twelve inches on the ordinary rule is not twelve inches on the foundry rule, and it will not be twelve inches long when it is placed in the sand but in the end you get the proper length of twelve inches when completed. And that is something you can't do in dentistry and make it fit the cavity of the tooth; something must be done to correct for that dimension and, if not, trouble is available at every turn. I will not go into this subject to say that you cannot expand a wax paste to take care of that shrinkage for it will be so soft that it will

not be stable. The second thing then that is available is the investment material. Of course the investment should expand, and if the investment expands the cavity gets large, if the investment does not expand the cavity gets smaller. Then of course you have plenty of investments that do not expand, as you well know, when heated to the temperature at which you are making your castings. There are materials available sold by manufacturers who will sell you materials that they guarantee to comply with all the specifications set up by the Reserve Commission.

Now, I come here not trying to sell you anything. I haven't a thing on the table that is for sale that means anything to me. I say that because I have been accused of selling or favoring certain people. If you read the December Dental Journal you will see a discussion of this subject; I didn't like for it to come up but it couldn't be omitted. And I can say to you truthfully that I have no interest in any dental material of any kind, in any supply house, in any school, or anywhere else. There is no way I can get a cent of your money, and there is no money being contributed. There have been cases where a party will receive a bonus, a gift, or a sale of fifty dollars a month, something of that kind. Now, that is very distasteful I know, and I hate to mention that, but I want you to get this in the proper light, that your Research Association and the Bureau of Standards are not financially interested in any part of this work at all. Of course they receive a salary, gentlemen, you wouldn't expect us to work without receiving a salary. The Association received a part of that—let's see—they received twenty-five cents a year of your dues last year, is what they received. And my salary and the Bureau workers' salaries come from the Treasury Department as a regular appropriation, let's get that straight.

Now I would like to show you some of the difficulties that might arise. We have been hearing a lot about the water bath for the last year or two. A doctor up in Pennsylvania, I believe, originated the water bath idea several years ago and only used it for his own purposes. The water bath was supposed to expand the wax pattern, it was supposed to take care of about eight-tenths of that shrinkage. Now the water bath is supposed to be a large chamber here, in which is placed water and the inlay or investment is dropped down into the water bath. And this water is, well suppose the wax pattern is made at 98 or 96, and this pattern is in here. I will make this diagram to show what I mean. Now they put them in say at room temperature.

This water here ought to be about a hundred, but we can have various temperatures, but we will take it at 120 for the purpose of illustration. We have here a solid light material, it's a pretty light material, the investment around in this part here, the investment is poured in here. And that starts at say 96 centigrade and this, then, was down to 72. You are expecting now that this material here will warm up from the heat received from the outside chamber, that the wax will expand and go to larger dimension. This then will come down here and you will have a new dimension to that wax, the model will be larger, the crown will be larger, or whatever it is, and it will come over like this to a new dimension. Now, that is expecting a whole lot of a weak thin edge of wax, isn't it? It is just expecting a whole lot of that wax to do that, and it doesn't do it! It is going to be cut up here and otherwise, and up at the top here, and it will be left over, like that. Furthermore, water may seep around and get in here and give you rough surfaces, and the thing just won't work. You will get a result that the consumer pays sixty-five dollars for and will use it for a week or two and put it up on the shelf. Dental offices are full of those things that didn't work. It is amusing sometimes to look at the things that the dentist will buy! Just give him some kind of new outfit and a smooth-talking agent, and some rich story, and the dentist will pay him fifty dollars and just be as happy as any one could be on that. I say, it is amusing sometimes to see how the money can be taken away from them! But then the more serious thing about that is, about the whole story is, you paid him that fifty dollars or that hundred dollars because you wanted to give something to your patients didn't you? You wanted to give them the best available for the price, and to give them the best service possible, and here some one has imposed upon you by selling you a bad material or a bad technique, or something of that nature, and it's just pathetic when you think of it in that way. You would have been better off if you had never seen him.

What are we going to do with the thing? I can't answer that. I don't know. The Research Commission has appointed a Committee of about a hundred or two hundred practicing dentists throughout the country, they are mostly near around Chicago and the central states, where Dr. Voller and Dr. Brown are located so they can keep in close contact with them and meet them at regular periods. Last week the Research Commission

was out around over the country meeting that crowd asking them and trying to find out what should be done in cases of this kind. This work will be terminated in a clinic at Memphis in October, and we hope to have the answer for you. I think it's going to come in two or three different ways, you are going to have four or five different answers to this method of handling material, but first those men are going to insist upon safe materials and they will not go into this work with any material whose properties are not known to those men. They are going to find out what the investment does and what the wax does, and it's true research work and the Bureau of Standards is doing everything possible to keep up with these properties and this work must be taken up by the manufacturers. And I believe it's your privilege and your duty perhaps to insist that the data shall be given, that the manufacturer shall guarantee that these materials comply with the certain minimum requirements, whatever they may be.

I told you that there were people at this time who can supply you with investment material that fill these requirements, and if you will look on the can you will find the statement, "This material is guaranteed to fulfill the specifications or comply with the specifications of the A. D. A." And if you will look in the last Journal, look at the May Journal, you will find advertisements there guaranteeing the materials to comply with the specifications of the A. D. A. I think it's your privilege to buy those materials that come up to the standards and that will accomplish the results of your fellow-members.

Now, at the Memphis meeting you may look for a clinic supervised by Dr. Voller and Dr. Brown, Dr. Kelly, and some thirty or forty members of the Research Commission. There are plans for a clinic that will show you the different ways of making inlays. One man is going to show you a faulty clinic; he is going to show you how, that is the plan now, to show you how you cannot get results. And I think he will give you some of the methods that have been shown you in clinics, making a rough M.O.D. restoration with a slight taper on it here, like this, about one or two degrees, showing that you cannot get the results expected unless the inlay is made properly. He is going to put his wax over here and make this restoration as he wants it, and then he is going to put a heavy oil in here, that is his plan now, and working that around a bit here. He is going to show you that he can make this investment without a wax

pattern and without any water bath, and his plan is to show you that inlay, and it's going to be bulged out here, and under here, right in under there, like that, and it's going to be pushed up a little bit here in this space here. But if you don't look good you won't see it unless it is pointed out to you. And you know with this kind of work your patient is coming back in six months or a year with decays. And that is one that you won't want to remember, that is one you want to forget about. We are trying to take all of this slight of hand business out of dentistry, and make it straightforward, fundamental, basic. The man who builds a bridge across the river here won't use any steel that hasn't been tested, and he will not use cables that have not been properly tested and inspected as to their relative strength and other requirements of the builder, for the contractor can't afford to risk his reputation on that piece of work and he insists upon having proper materials. Suppose then the bridge falls; then he says, "Well, here is my chart, these are the materials I used, they are recognized by engineers as being safe materials. Now, something else happened. You can look for some other defect, something else happened to it, and it's not my fault if failure came."

Now I want to describe a number of these things. It takes about six hours to go through this work and go through it properly; but I think, I believe I can get through with the ones that are necessary, and we will start with those right away. Suppose we start in on those and I will give you the story.

(Editor's Note: Dr. Souder followed his lecture with several interesting and instructive slides, illustrating chiefly what he had already said. Since we cannot reproduce these slides we feel that printing the remarks directed thereto is not justified.)

President Jones:

Dr. Souder, we certainly appreciate your talk which can be applied to our daily lives of all of us as practicing dentists. I hope we will hear some expressions and a lot of questions that he will attempt to answer.

Dr. Burns, Atlanta:

Mr. President, I would like to ask Dr. Souder about the specifications for the various, well alloys for instance, casting golds, investments, whose specifications are those; is that the

United States Bureau of Standards? I ask this for the benefit of the audience here. Or, are those the specifications of the manufacturer as they appear on the package?

Dr. Souder:

The preparing of the specifications is a long and tedious process. I will illustrate this by the work we did for Colonel Rodes, we did a lovely piece of work for the United States for the use of the Army. This was four years ago. We told him we would find out from our men, the research corps over the United States what gold they were using for inlays, soft and hard inlays, what gold were they using for clasps, what gold were they using for crowns. And those men replied. And we told him we would test the physical properties, assuming that those men are using the best materials. And then we added to that whatever seemed to be necessary in terms of mechanical engineering. All right the materials came in. So the information that we got from you dentists, that you supplied, plus the information that we got otherwise, was assembled. And then the specification was written up as a preliminary draft and that was sent out to the manufacturers and the schools and to the people over the country, with the question "Now, what do you think about this?" Well, the replies came in. Then after we got this all assembled and got out a specification we sent that to them and said, "Can you manufacturers make this alloy?" and if they say they can make it then that is the specification. That is the preliminary specification that is going out, and you will see one of those in your Journal now that is the result of this gold alloy specification.

So, it's a long, tedious, process of thinking, applying a bit of science to it, applying your experience to it, and then finally giving it out over the country.

Dr. Burns:

Dr. Souder, how many various materials such as investments, or golds, or casting gold, how many specifications have you decided upon?

Dr. Souder:

I think the association has passed on only two as the final passing. One is the dental amalgam, and that was passed on some time ago, and then this gold specification for inlays came through about two or three weeks ago, and was sent back, and I

believe they are going to approve that. Now, we have one on investments that is not final. And we have one on waxing that is not final, and one on compound that is not final. So we are just in that incubation stage there when the progress is slow but sure. I hope you won't be discouraged in this. The story is told of an old pawnshop man who always sold something when a customer came in, and he instructed his boy in the art of keeping the shop. He says, "Now sell something to everybody that comes in." Well, he left the boy in charge one day. The old man went out awhile and then he came back and he says to the boy, "Well, did you have any customers while I was gone?" the boy said "Yes sir." The old man said, "Did you sell them anything?" and the boy said "No sir, I didn't sell anything." The old man says, "You had customers and didn't sell them anything, you will never be a success." The boy said, "Well, it was this way. You sold that boy a diamond ring for seventy-five dollars yesterday for his sweetheart, and he took it with him last night and he was going to propose to her, and if she accepted him he was going to put the ring on her finger. And you told him if she didn't accept him that you would buy it back. Well, he came back, and he says he is down-hearted, that she said no. He said he just wanted to kill himself. So, I gave him back the seventy-five dollars." The old man said, "But why didn't you sell him something?" the boy said, "Well, he was feeling so bad I didn't know what to sell him." The old man said, "Why in the thunder didn't you sell him a pistol!" (Laughter.)

Now, we haven't offered you anything yet that is absolutely the last word and I hope you won't be too insistent but will give us just a little more time and put your confidence in the Research Commission's work, and believe that they are going to get some where.

Dr. Phin E. Horton, Winston-Salem:

I just want to say that this address is one of the best things I have ever known. Here we are getting down really to the meat in the coconut and down to where we live. It is one of the most important things that I know of. We are certainly indebted to the Bureau of Standards for what they have gained so far and it is only the beginning of what we are going to get later on. And I believe that the manufacturers are going to have to sit up and take notice of what is going on.

President Jones:

Is there other discussion?

Dr. F. L. Hunt, Asheville:

I would like to ask the Doctor one question in regard to his expansion of silver alloy. What variations in temperature from body temperature would cause say a one per cent either expansion or contraction?

Dr. Souder:

I didn't give any definition on that?

Dr. F. L. Hunt:

That is why I asked the question.

Dr. Souder:

I would have to figure on that a little bit. It would probably be—

Dr. F. L. Hunt:

The difference between ice cream and hot coffee?

Dr. Souder:

Yes. I would guess about two hundred degrees.

Dr. Robert H. Jones, Winston-Salem:

Doctor, a few years ago I saw a statement about different amalgams in one of our journals recommending that several of these amalgams are safe and good, and condemning others. Am I right about that sir?

Dr. Souder:

You are right, but he put a disclaimer after that immediately. He said this represents the amalgams which I bought at this time, at the time I bought them, and he said he did not want it understood that he was recommending them from now on. They say they want a manufacturer to put a little statement on the side of the can guaranteeing that they comply with the specifications, then they will be responsible from that time on.

President Jones:

If that concludes the discussion, at this time I am going to ask Dr. Harry Keel to come forward and make the report of the general Chairman of Arrangements.

In taking up the reports of the committees, due to the fact that the Golf Committee has put on such a successful game we think the whole assembly ought to hear their report, and Dr. Keel asked that I ask Dr. Mastin to make that report.

Dr. Guy M. Mastin, Winston-Salem:

Mr. President, the report of Golf Committee of the North Carolina Dental Society, May 6, 1931, is as follows: Through the courtesy of the Twin City Country Club a golf tournament was held for the members of the North Carolina Dental Society, Tuesday, May 5th. There were six prizes awarded. First a blanket given for low score, won by Dr. M. B. Massey. Second, one-half dozen suits of underwear for the person making the most number of pars, won by Dr. W. F. Miller. First prize in Blind Bogey tournament, one dozen golf balls, won by Dr. L. M. Daniels; second 9 golf balls, won by Dr. L. G. Coble; third, six golf balls, won by Dr. C. C. Bennett; fourth, 5 golf balls won by Dr. O. L. Joyner. The prizes were donated by the following firms: Chatham Manufacturing Company, P. H. Hanes Knitting Company, Powers & Anderson Dental Company, all of Winston-Salem, and Thompson Dental Company, of Greensboro. Respectfully submitted, Guy M. Mastin, Fred Anderson and Fred Mendenhall. (Much applause.)

President Jones:

I thank you very much for your report.

We will have the report of Dr. Harry Keel now, Chairman of the General Committees.

Dr. Harry Keel, Winston-Salem:

Mr. President and Members of the North Carolina Dental Society:

Your General Chairman of Committees in Winston-Salem begs leave to submit the following report:

Immediately after the meeting in Asheville, your Committee on Arrangements went to work. We first made arrangements with the Robert E. Lee Hotel for Convention Headquarters. The hotel assured us of their wholehearted coöperation and wrote us a letter stating that the Convention Hall, Lecture Rooms and Exhibit Space on the mezzanine floor would be at our disposal, free of charge, during the meeting. So far, we have not asked them for a thing that has not been granted willingly, and they have been called upon repeatedly. They put a large room at our disposal for committee meetings. This room has been used time and again by your committees throughout the past year. The coöperation that we, your committees, have received from the hotel people during the last

twelve months and during the meeting has been excellent. Possibly it could be improved on but I do not know where. Mr. Teneille, the manager, and his capable assistant Mr. Nicholson, have always stood ready to render us any service possible.

As your General Chairman of your Committees in Winston-Salem, I called a meeting of the different committees early last fall. We met in conjunction with the Forsyth County Dental Society. At this time the committees were instructed to be ready to offer suggestions at our next meeting which was to be held thirty days hence. We requested the Executive Committee of the Forsyth County Dental Society to be with us at our meetings, because we knew that there would be some expense attached to the State meeting which would have to be borne by the local society and we wanted their approval.

Our next meeting was called thirty days later for the purpose of receiving and discussing any suggestions that might be offered. There were eleven men present and each man had suggestions to make. Notes were taken of these suggestions and each man was requested to think them over so that they could be voted on at our next meeting. A few weeks after this another meeting was called and final arrangements made. Each man was given instructions as to what his duties should be prior to and during the Convention.

The Entertainment Committee was instructed to make plans for our banquet and furnish all entertainment connected with it. They were also instructed to furnish entertainment for the ladies, Tuesday afternoon and night. This committee has made its own report.

The Golf Committee was instructed to go ahead with plans for a tournament, to be held Tuesday afternoon, for those who desired to play. Also they were to furnish trophies for the tournament. This committee has also made its own report.

Your Arrangements Committee was instructed to make all arrangements for the meeting. As stated above, arrangements were made with the hotel. Floor plans of the Convention Hall, Lecture Rooms and Exhibit Space were furnished the secretary.

Several mailing lists were made and furnished the following: Hotel Robert E. Lee, Chamber of Commerce, Merchants Association and our local newspaper. I presume that every man in the Society received letters from the above, as well as a copy of our local newspaper. You probably noticed that we had something of the history of the North Carolina Dental Society, as well as a complete program, in this issue of our paper. Also a letter was sent out by the Forsyth County Dental Society to each member cordially inviting them to attend the meeting. The reason for having these letters and newspapers sent throughout the State was to stimulate interest and we felt that by constantly keeping this publicity before the members we would increase the attendance.

The expense of the newspapers and letters from the Forsyth County Dental Society, was borne by the local Society.

Your Arrangements Committee has had, from time to time, articles run in our local paper regarding the coming meeting. This publicity was started last January.

Reservations were made for our guests as well as our members.

Our guests were entertained by your committees to the best of their ability.

Letters were written to the colored dentists of Winston-Salem inviting them to attend our scientific sessions. This was sanctioned by the Executive Committee of the North Carolina Dental Society and the Forsyth County Dental Society. We sent a list of the colored dentists to Dr. Fred Hale so that programs could be mailed to them.

Visiting clinicians were met and taken to trains upon arriving and leaving the city.

Made arrangements with the Burroughs Adding Machine people for five machines to be used at our election of officers.

Two clinicians rooms were kept ready for use at all times.

We have endeavored to make all arrangements for this meeting in keeping with previous meetings, to the best of our ability. This has entailed an enormous amount of work but we did it cheerfully.

To the men who have worked with me on the various committees, I wish to express my deep appreciation of their loyal support and wholehearted coöperation. They have been ready and willing at all times to do whatever work was put before them.

I also wish to thank the members of the Forsyth County Dental Society for their willing support and financial aid in helping us to entertain the ladies and for the many other necessary ways in which they have helped us.

I would like to thank the men of the Journal and Sentinel who did so much toward making our meeting a success. Especially Mr. Denkins for his splendid articles. We wish to express our appreciation to the Chamber of Commerce and Merchant's Association, who sent letters to all members in the State. To the wives of the dentists in our city, who by their untiring efforts so efficiently entertained our visiting ladies, I wish to express my deep appreciation.

Time will not permit me to thank everyone who has been of assistance to us, before and during the meeting.

Your General Chairman of Entertainment, Arrangements and Golf has answered all correspondence promptly and endeavored in every way to coöperate with the officers of the North Carolina Dental Society.

Respectfully submitted,

HARRY KEEL.

President Jones:

You have heard the report of your General Chairman; what is the wish of the Society?

Dr. C. E. Minges, Rocky Mount:

I move the report be accepted and that the thanks of this Society be extended to the Chairman of this Committee and his associates.

This motion was seconded by several, put by the President, and carried.

President Jones:

Is there anything else that anybody wants to bring up at this general session?

Dr. J. S. Betts, Greensboro:

Mr. Chairman, we have great pride in many things in regard to the status of dentistry in North Carolina. We think we are on the upgrade, and that we deserve something of the commendation that we receive and the coöperation that we enjoy from the medical profession. I wish right now to call attention to the splendid and efficient work that is being done by Dr. Branch in connection with the State Board of Health in the Oral Hygiene Department. I have a resolution to offer from the floor in this regard.

I move you Sir, that the North Carolina Dental Society endorse the activities of the Department of Oral Hygiene of the North Carolina State Board of Health. I move its adoption.

This motion was seconded, put by the President, and carried.

President Jones:

Are there any other committees that wish to make their report at this time?

If there are no other special reports to come before this general session, I am going to ask you all to stay now and finish up the business. We are going to transact the business of the Society and get it over with and install the officers before we leave here.

I declare the general session of the North Carolina Dental Society adjourned, and I will now bring the House of Delegates to order. We are now in a meeting of the House of Delegates. We will have the committee reports.

I will receive the report of the Committee on Oral Hygiene at this time.

Dr. Ernest A. Branch, Raleigh:

Mr. President:

REPORT OF THE ORAL HYGIENE COMMITTEE

Your Oral Hygiene Committee begs to pay its respect to the Legislative Committee who successfully sponsored a bill through the State Legislature placing a dentist as a member on each County Board of Health. This will mean as much or more for Oral Hygiene teaching in our schools as any one thing could possibly have done.

As for Oral Hygiene activities, there have been 48,067 children examined by the dentists employed by your State Board of Health, and 40,580 treated, which required 148,743 operations. Work was done in forty-four counties and eight orphanages. Lectures have been delivered to approximately 200,000 children and adults in the schools, parent-teacher associations and civic clubs.

ERNEST A. BRANCH, D.D.S., *Chairman.*

It was moved that this report be adopted; seconded; put by the President, and carried.

President Jones:

We will now have the report of the Program Clinic Committee.

Dr. N. P. Maddux:

Mr. President and Members of the North Carolina Dental Society: We, the Program Clinic Committee wish to present as our report, the program as printed in the BULLETIN. Respectfully submitted: N. P. Maddux, Chairman, H. L. Keith, D. L. Pridgen, Z. L. Edwards.

I would also like to make the report of the Exhibit Committee: The Exhibit Committee wishes to report sale of space, amounting to \$470.00. Collected to date \$220.00. We wish to assure the Society that the balance due will, in our opinion, be collected before the end of this meeting. Respectfully submitted: N. P. Maddux, Chairman, G. C. Hull, J. R. Self.

It was moved and seconded that these two reports be adopted; the motion was put by the President and carried.

President Jones:

We will now have the report of the Membership Committee.

Dr. Dennis Keel, Greensboro:

The Membership Committee reports the following:

FIRST DISTRICT:

New members	8
Members paid up one year	81
	89

SECOND DISTRICT:

New members	3
Members paid up one year	124
	127

THIRD DISTRICT:

New members	2
Members paid up one year	102
	104

FOURTH DISTRICT:

New members	1
Members paid up one year	87
	88

FIFTH DISTRICT:

New members	None
Members paid up one year	93
	93

Total paid up	486
Total number up for suspension	35

Signed:

DENNIS KEEL, *Chairman.*
 J. E. L. THOMAS,
 W. F. MUSTIAN,
 H. V. MURRY,
 A. S. BUMGARDNER,
 C. S. McCALL.

This report was unanimously adopted by the Society:

President Jones:

I would like to have the Auditing Committee's report at this time.

Dr. Paul Fitzgerald, Greenville:

Mr. President and Members of the North Carolina Dental Society:

Your Auditing Committee wishes to report that the accounts of the Secretary-Treasurer, Dr. N. P. Maddux, have been audited as of April 30, 1931. The books of the Treasurer were found to have been well kept and the accounts correct.

In view of the fact that the Secretary-Treasurer's full report will not be made until the proceedings of the 1931 meeting are printed, it was thought advisable that some of the totals be given at this time.

Cash in the banks	\$ 1,633.43
Accounts receivable	330.00
Liabilities	4.00
	1,963.43
Total net worth	\$ 1,963.43

The above figures do not take into consideration the estimated budget expense of this meeting, which is \$1,975.00, nor the salaries of the Secretary-Treasurer and the Editor-Publisher, which total \$700.00—Totaling \$2,675.00.

I am glad to report that your Treasurer, Dr. Maddux assures us that in spite of the depression, that the North Carolina Dental Society will pay out in 1930-1931.

In passing, the Auditing Committee wishes to commend Dr. Maddux and other officers of the Society on the economy practiced in the conduct of its affairs during the past year and to say that we think the thanks of the Society are due Dr. Maddux for his splendid efforts.

Signed:
PAUL FITZGERALD, Acting Chairman.

It was moved and seconded that this report be adopted; the motion was put by the President and carried.

Dr. C. E. Minges, Rocky Mount:

Mr. President, this is a matter that was brought up before this Society yesterday, the proposition of the future policy of the Bulletin. As stated by Dr. Hale, if we do not specify a subscription price on this magazine, the BULLETIN, we cannot include any advertisements in our bulletin. This matter was brought up and deferred until today. I just bring it before you for some action.

President Jones:

What is the desire of the House of Delegates?

Dr. J. Martin Fleming, Raleigh:

I move, Mr. President, the matter be left in the hands of the Executive Committee, on account of the shortness of time now, the incoming Executive Committee.

This motion was seconded, put by the President, and carried.

President Jones:

Is the Dental College Committee ready to report? I have a letter here from Dr. Lineberger telling me that he was unable to be at this meeting on account of another engagement. Dr. Lineberger makes the following report: "I called a meeting of the Dental College Committee last Wednesday in Durham. None of the Committee showed up, however, upon looking around a little bit there seems to be no definite change and for a report

I would say things are about as they were, namely, in a status quo. Signed: H. O. Lineberger, Chairman."

We will now have the report of the Virginia-Carolina Clinic Committee.

Dr. F. O. Alford, Charlotte:

Mr. President and Gentlemen:

REPORT OF THE VIRGINIA-CAROLINA CLINIC COMMITTEE

The Virginia-Carolina Clinic Committee, wishes to report that the Post-Graduate Clinic was held on February 23rd and 24th, 1931, at the Medical College of Virginia, School of Dentistry. There were (64) dentists in attendance, with only (2) of this number from North Carolina. We feel that the poor attendance from this State was due to the fact that we have had several Post-Graduate courses, sponsored by our University recently.

On the program were:

Dr. Dayton Dunbar Campbell, Kansas City, who gave an illustrated lecture on "*Prosthetics*."

Dr. James R. Blayney of Chicago, on "*Root Canal Therapy and Dental Therapeutics*."

Dr. George C. Paffenbarger, and W. T. Sweeny of the National Bureau of Standards, Washington, D. C., on "*Intay Castings Investments and Technic*."

The members of the Committee fully coöperated with the School, in announcing the clinic at local society meetings and by personal letters, urging attendance.

The Committee wishes to urge that more members of this Society attend the clinic, at its future meetings.

Respectfully submitted:

F. O. ALFORD, *Chairman.*

NEAL SHEFFIELD,

W. F. CLAYTON,

J. R. ALLISON,

D. K. LOCKHART,

H. E. NIXON,

RALPH CLEMENTS.

It was moved the report be adopted, seconded, was put by the President and carried.

President Jones:

The Publicity Committee has nothing to report.

Are there any other committees to report before this meeting of the House of Delegates?

We haven't had the report, I believe, of the Secretary and Treasurer of the North Carolina Dental Society. We will now have that.

Secretary N. P. Maddux, Asheville:

Mr. President and Members of the North Carolina Dental Society: This report is the same as that of the Auditing Committee already turned in.

I would like to have my final report, as audited by a Certified Public Accountant and checked by the Executive Committee appear here.

STATEMENT OF RECEIPTS AND DISBURSEMENTS
NORTH CAROLINA DENTAL SOCIETY

N. P. MADDUX, D.D.S., Asheville, N. C.
Secretary and Treasurer

For the Period from October 4, 1930, to June 25, 1931

Rocky Mount, N. C., July 8th, 1931.

DR. C. E. MINGES, *Chairman Executive Committee,*
North Carolina Dental Society,
Rocky Mount, North Carolina.

Dear Sir:

Pursuant to your instructions, we have made an examination of the recorded transactions of N. P. Maddux, D.D.S., Asheville, North Carolina, Secretary and Treasurer of the North Carolina Dental Society, covering period from October 4, 1930, to June 25, 1931, and as a result thereof, we submit the following described statements:

Exhibit A—Statement of receipts and disbursements—for the period from October 4, 1930, to June 25, 1931.

Schedule 1—Reconciliation of account with First National Bank and Trust Company, Asheville, N. C., June 25, 1931.

We found that all receipts of record were properly accounted for and all disbursements supported by cancelled checks. The cash balance at the close of the period was reconciled by examination of statement submitted by the depository bank, as shown in Schedule 1.

Respectfully submitted,

B. E. PERKINSON & Co.,
Certified Public Accountants.

EXHIBIT A

STATEMENT OF RECEIPTS AND DISBURSEMENTS

For the Period from October 4, 1930, to June 25, 1931

RECEIPTS

FROM DISTRICTS:

First District:

Annual Dues	\$ 728.00
Life Members	8.00 \$ 736.00

Second District:

Annual Dues	\$1,202.00
Life Members	48.00 \$1,250.00

Third District:

Annual Dues	\$1,008.00
Life Members	56.00
	<hr/>
	\$1,064.00

Fourth District:

Annual Dues	\$ 718.00
Life Members	20.00
	<hr/>
	\$ 738.00

Fifth District:

Annual Dues	\$ 844.00
Life Members	28.00
	<hr/>
	\$ 872.00

Total Receipts from Districts	\$4,660.00
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OTHER RECEIPTS:

From Exhibitors at 1931 State Meeting	\$ 460.00
Balance Received from Former Secretary and Treasurer	32.00
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Total Other Receipts	\$ 492.00
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Total Receipts	\$5,152.00
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NOTE: This Exhibit is subject to the comments attached.

DISBURSEMENTS

To DISTRICTS:

First District:

Proportionate part of Annual Dues from Members	\$ 48.00
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Second District:

Proportionate part of Annual Dues from Members	72.00
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Third District:

Proportionate part of Annual Dues from Members	60.00
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Fourth District:

Proportionate part of Annual Dues from Members	28.00
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Fifth District:

Proportionate part of Annual Dues from Members	11.00
Refunds of Overcharges	3.00
	<hr/>

Total Disbursements to Districts	\$ 222.00
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AMERICAN DENTAL ASSOCIATION:

Proportionate part of Dues from Members:

Annual Dues	\$1,576.00
Life Members	160.00
	<hr/>

	\$1,736.00
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EXPENSE:

Salary—Secretary and Treasurer	\$ 350.00
Salary—Editor and Publisher	350.00
Salaries—District Secretaries	125.00
Telephone and Telegraph	29.22
Postage	40.15
Multigraphing Legislative Letters	5.00
Bond Premium—Secretary and Treasurer	7.50
Legislative Work—Dr. J. N. Johnson	30.70
Expenses—Drs. H. L. Keel and J. N.	
Johnson, 1931 Meeting	64.18
Entertainment Expense of Associated	
Press Representatives	75.00
State Meeting Secretaries	35.00
N. C. Dental Relief Fund	200.00
Worth Reporting Company—Reporting	
Meeting	178.13
Flowers for Deceased Dentists	20.67
Medals Awarded at State Meeting	48.00
Badges for State Meeting	20.25
Clinicians Expenses	371.26
Stationery, Printing and Supplies	108.27
<hr/>	
Total Expense	\$2,058.33
<hr/>	
Total Disbursements	\$4,016.33

BALANCE—JUNE 25, 1931:

Funds on Deposit, First National Bank and Trust Company, Asheville, North Carolina	\$1,135.67
Total Disbursements and Balance	\$5,152.00

SCHEDULE 1**RECONCILIATION OF ACCOUNT WITH FIRST NATIONAL BANK AND TRUST
COMPANY, ASHEVILLE, N. C., JUNE 25, 1931**

Balance per Bank Statement \$1,401.80

Less: Checks Outstanding:

Number	Payable to	Amount
65	Dr. R. A. Wilkins—Secretary	\$ 60.00
82	Dr. R. A. Wilkins—Secretary	8.00
86	American Dental Association	4.00
87	American Dental Association	8.00
88	American Dental Association	8.00
89	Worth Reporting Company	178.13 \$ 266.13
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Balance—Per Exhibit A		\$1,135.67

NOTE: This Schedule is subject to the comments attached.

The above report includes all expenses in connection with operating the Society for the fiscal year and the cost of the annual meeting, but does not include printing the proceedings.

Below is printed financial statement of the North Carolina Dental Society from January 28, 1928, to September 5, 1930:

Greensboro, N. C., September 6, 1930.

North Carolina Dental Society,

Greensboro, North Carolina.

Gentlemen:

We have audited the books and records of your Treasurer, Dr. Dennis F. Keel, from January 25, 1928, to and including September 5, 1930, and have prepared therefrom one Exhibit and one Schedule as follows:

Exhibit "A"—Receipts and Disbursements.

Schedule 1—Bank Reconciliation.

SCOPE OF EXAMINATION

Our examination included the verification of all recorded receipts as to their source and deposit; disbursements as to object of expenditure, endorsement of check, and distribution thereof.

Proper reconciliation was made with your depository as per Schedule 1.

Respectfully submitted,

EVERETT, ZANE & MUSE,
By D. H. Everett, C. P. A.

EXHIBIT "A"

RECEIPTS AND DISBURSEMENTS

SEPTEMBER 5, 1930

RECEIPTS

Cash on Deposit Last Audit	\$ 1,994.06
Dues Collected	\$ 13,516.00
Advertising and Exhibit Fees	2,417.25
Total Receipts and Balance.....	\$ 17,927.31

DISBURSEMENTS

Supplies	\$ 669.09
A. D. A. Dues	4,448.00
District Dues	445.00
Printing and Binding	5,978.41
Charity	600.00
Return Checks	183.00
Protest Fees90
Service Charge—Bank50
Refunds—Overpayments	62.00
Postage	71.95

Letters—Multigraph	\$ 18.00
Photographs	3.75
Salary—Treasurer	2,600.00
Entertainment Expenses	1,326.30
Auditing	25.00
Flowers—Meetings	68.15
Cuts—Paper	4.25
N. C. D. Society Meeting	22.30
General Expense	559.86
Transfer Cost	4.65
Insurance	5.00
Collection Expense	225.00
Reporting Meetings	302.37
Bond	7.50
Telephone and Telegraph	264.93

	\$ 17,895.31
Cash on Deposit September 5, 1930	32.00
Total Disbursements and Balance	\$ 17,927.31

SCHEDULE 1

RECONCILIATION OF BANK ACCOUNT

SEPTEMBER 5, 1930

North Carolina Bank & Trust Company, Greensboro, N. C.

Balance as per Bank Statement 9-6-30	\$ 40.00
Less: Outstanding Check No. 325	8.00

	\$ 32.00

Dr. N. P. Maddux:

The following list of members are up for suspension for non-payment of dues:

FIRST DISTRICT

Dr. E. N. Biggerstaff.....	Spindale
Dr. E. W. Connell.....	Mount Holly
Dr. L. M. Coffey.....	Lincolnton
Dr. R. C. Hicks.....	Shelby
Dr. C. F. Taylor.....	Belmont
Dr. A. V. Boyles.....	Dallas

SECOND DISTRICT

Dr. J. M. Folger.....	Dobson
Dr. P. C. Hull.....	Charlotte
Dr. H. L. Monk, Jr.....	Salisbury
Dr. Stephen H. Strawn.....	Marshville

THIRD DISTRICT

Dr. H. A. Edwards.....	Greensboro
Dr. D. H. Erwin.....	Greensboro
Dr. J. L. Gibson.....	Laurinburg
Dr. J. B. Newman.....	Burlington

Dr. J. H. Parmalee.....	Pinehurst
Dr. Alex R. Stanford.....	Greensboro
Dr. O. W. Thrift.....	Greensboro
Dr. T. S. Wilson.....	Draper

FOURTH DISTRICT

Dr. Dexter Blanchard.....	Raleigh
Dr. H. B. Bowden.....	Red Springs
Dr. W. T. Herndon.....	Fayetteville
Dr. W. B. Johnson.....	Selma
Dr. Lewis J. Pegram.....	Raleigh
Dr. J. C. Johnson.....	Cary

FIFTH DISTRICT

Dr. Fred Coleman.....	Wilmington
Dr. J. M. Jacobs.....	Roxobel
Dr. W. E. Murphy.....	Rosemary
Dr. G. A. Wooten.....	Kinston
Dr. R. L. Whitehurst.....	Plymouth
Dr. H. J. Kornegay.....	Warsaw

Dr. E. B. Howle, Raleigh:

I would like to ask the Secretary if he thinks now, from the amount of money that he has on hand as of April, 1930, and adding to that the amount that is to be taken in since then, if that will be enough to cover the expense of this twenty-six hundred dollars?

Secretary Maddux:

I don't believe there is any doubt on earth, Dr. Howle, but that we will have a balance.

Dr. F. L. Hunt, Asheville:

I understand that budget is for 1931?

Secretary Maddux:

1931, running through and paying for this meeting, yes sir.

It was moved that the report made by the Secretary be adopted, which was seconded, put by the President, and carried.

President Jones:

That includes all the committee reports that I recall. Is there any other report that we ought to have before this House of Delegates before we adjourn?

Dr. Phin E. Horton, Winston-Salem:

The Entertainment Committee wishes to submit the following report:

ENTERTAINMENT COMMITTEE REPORT

The Entertainment Committee has the following report:

The Banquet was arranged at Hotel Robert E. Lee. Golf privileges were arranged at Forsyth Country Club.

The entertainment especially for the lady guests included a theatre party, an automobile ride over the city, a visit to the Museum of the Historical Society, and a visit to Salem College where they were entertained at a tea.

The Committee is greatly indebted to the wives of the Winston-Salem dentists, with Mrs. Phin Horton as chairman and to Dr. and Mrs. Howard Rondthaler and Rev. Douglas Rights for the assistance they rendered this Committee.

Respectfully submitted,

JOHN A. MCCLUNG, *Chairman.*

PHIN HORTON,

ALFRED P. HARTMAN.

Dr. T. E. Sikes, Greensboro:

The following is the report of the Table Clinics Committee:

The Table Clinics presented at the fifty-seventh annual meeting of the North Carolina Dental Society in Winston-Salem, N. C., were of a very high degree and deserved the attention of every member registered.

Too much cannot be said in the way of encouragement to the men who prepared these clinics.

At the same time we wish to recognize the Clinic Committee for their splendid work and express our most sincere thanks for the interest demonstrated by the visiting clinicians.

It was moved that the report be adopted, seconded, was put by the President and carried.

President Jones:

Is there any unfinished business? If not, I am going to declare this meeting of the House of Delegates adjourned, and the General Session of the North Carolina Dental Society convened.

The North Carolina Dental Society will please come to order.

The order of business at this time, if nobody has anything special to bring before this body, is the installation of officers. I will ask Dr. Clyde Minges and Dr. Alford to escort the incoming President to the platform.

Dr. Dennis Keel, of Greensboro, is brought forward.

It gives me a great deal of pleasure to yield this office to you with my best wishes that you will have the thorough co-operation next year that I had this year, Dr. Keel. (Much applause.)

Dr. Dennis Keel:

The next order of business, Gentlemen, is the induction into office of our Vice-President. I will ask Dr. Joe Betts and Dr. Keith to escort the Vice-President to the platform.

Dr. L. M. Edwards, of Durham, is brought forward.

The next order of business, I believe, is the induction into office of the Secretary and Treasurer, who is already here.

Following that, the two members of the State Board, who were elected to succeed themselves, Dr. Howle and Dr. McClung. I will ask Dr. J. Martin Fleming and Dr. Clyde Minges to escort Dr. Howle and Dr. Sam Bobbitt and Dr. Fred Hunt to escort Dr. McClung to the platform.

Dr. E. B. Howle and Dr. John A. McClung were brought forward.

Gentlemen, it seems that I have made an error here, that I should have installed the President-Elect. So I will ask Dr. Bobbitt and Dr. Hunt to escort the President-Elect to the platform.

Dr. Wilbert Jackson was brought forward. (Applause.)

Gentlemen, is there any other business to come before this assembly? If not, I will proceed to read the committees for the ensuing year, these appointments being subject to your approval.

COMMITTEES

EXECUTIVE COMMITTEE

	<i>District</i>
Z. L. Edwards, <i>Chairman</i> , Term Expires, 1934.....	5
W. F. Clayton, Term Expires, 1933.....	3
S. B. Bivens, Term Expires, 1932.....	2

PROGRAM AND CLINIC COMMITTEE

N. P. Maddux, <i>Chairman</i>	1
T. E. Sikes, <i>Vice-Chairman</i>	3
W. F. Medearis.....	2
S. L. Bobbitt.....	4
Oscar Hooks.....	5
Cecil Pless.....	1

ETHICS COMMITTEE

	<i>District</i>
J. S. Betts, <i>Chairman</i>	3
Dean Crawford.....	1
J. W. Whitehead.....	4

LEGISLATIVE COMMITTEE

E. B. Howle, Term Expires, 1935.....	4
Z. L. Edwards, Term Expires, 1934.....	5
J. Martin Fleming, Term Expires, 1933.....	4
J. N. Johnson, Term Expires, 1932.....	5
P. E. Jones, Term Expires, 1936.....	4

ORAL HYGIENE COMMITTEE

E. A. Branch, <i>Chairman</i>	4
R. Phillips Melvin.....	5
W. E. Clark.....	1
W. D. Gibbs.....	2
H. Kemp Foster.....	3

AUDITING COMMITTEE

Neal Sheffield, <i>Chairman</i>	3
R. E. Williams.....	5
Burke W. Fox.....	2

SUPERINTENDENT OF CLINIC COMMITTEE

L. R. Gorham, <i>Chairman</i>	5
A. P. Cline.....	1
W. L. Kibler.....	2
C. H. Teague.....	3
B. L. Aycock.....	4

CLINIC BOARD OF CENSUS

W. F. Bell, <i>Chairman</i>	1
E. S. Hamilton.....	2
J. B. Richardson.....	3
L. J. Pegram.....	4
B. McK. Johnson.....	5

RESOLUTIONS COMMITTEE

C. E. Minges, <i>Chairman</i>	5
O. L. Presnell.....	3
K. A. Karesh.....	1
G. E. Waynick.....	2
L. M. Massey.....	4

NECROLOGY COMMITTEE

J. G. Poole, <i>Chairman</i>	5
S. E. Moser.....	1
L. R. Thompson.....	2
R. W. Brannock.....	3
Victor Bell.....	4

STATE INSTITUTION COMMITTEE

	<i>District</i>
T. L. Young, <i>Chairman</i>	4
A. Pitt Beam.....	1
W. W. Abernathy.....	2
L. M. Foushee.....	3
G. L. Overman.....	5

MILITARY COMMITTEE

G. A. Lazenby, <i>Chairman</i>	2
P. R. Falls.....	1
L. H. Zimmerman.....	3
C. H. Bryan.....	4
S. D. Poole.....	5

LIABILITY INSURANCE COMMITTEE

C. C. Poindexter, <i>Chairman</i>	3
T. A. Wilkins.....	1
J. P. Bingham.....	2
H. R. Chamblee.....	4
L. J. Meredith.....	5

MEMBERSHIP COMMITTEE

Wilbert Jackson.....	4
Chas. S. McCall.....	1
Fred Hall.....	2
R. A. Wilkins.....	3
S. L. Bobbitt.....	4
J. E. L. Thomas.....	5

EXHIBIT COMMITTEE

N. P. Maddux, <i>Chairman</i>	1
J. L. Ashby.....	2
J. S. Moore.....	3
W. M. Ward.....	5
I. H. Hoyle.....	4
Paul Fitzgerald.....	5

DENTAL COLLEGE COMMITTEE

J. H. Wheeler, <i>Chairman</i>	3
H. O. Lineberger.....	4
J. Martin Fleming.....	4

EXTENSION COURSE COMMITTEE

J. N. Johnson, <i>Chairman</i>	5
E. B. Howle.....	4
Dennis Keel.....	3
A. H. Fleming.....	4
E. A. Branch.....	4

COMMITTEE ON RELATIONS OF PHYSICIANS AND DENTISTS

	<i>District</i>
H. L. Keith, <i>Chairman</i>	5
Henry C. Carr.....	3
S. Robt. Horton.....	4
Fred L. Hunt.....	1
P. C. Hull.....	2
John Pharr.....	2

LIBRARIAN

Jessie L. Zachary.....	4
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CAROLINA-VIRGINIA CLINIC COMMITTEE

L. G. Coble, <i>Chairman</i>	3
O. L. Moore.....	1
R. C. Flowers.....	2
E. L. Smith.....	4
M. B. Massey.....	5

ENTERTAINMENT COMMITTEE

L. H. Butler.....	5
J. H. White.....	5
S. W. Gregory.....	5
W. S. Griffin.....	5
J. F. Duke.....	5

PUBLICITY COMMITTEE

Harry Keel, <i>Chairman</i>	2
L. H. Mann.....	1
J. H. Lashley.....	3
D. L. Pridgen.....	4
J. R. Allison.....	5

GOLF COMMITTEE

A. T. Jennette.....	5
W. I. Hart.....	5
J. M. Kilpatrick.....	5

GENERAL ARRANGEMENT COMMITTEE

H. E. Nixon, <i>Chairman</i>	5
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It was moved that the appointments as suggested by the President be adopted by the meeting; this motion was seconded, put by the President and carried.

President Jones:

Is there any further business to come before this body?

Dr. S. B. Bivens:

Mr. President, I am speaking for the Executive Committee, and particularly for the Chairman who is absent, Dr. Edwards.

This Committee, in anticipation of the appointment of the committees, had a meeting this morning; and we have tentatively set the date for our next annual meeting, which will be the first Monday, Tuesday and Wednesday of May. Now, this is not final, but it is tentative.

I would like to state here, also, that Dr. Fred Hale has been reelected to succeed himself as Editor and Publisher for one year. (Applause.)

President:

Is there any other business to come before this body? If not, I declare the meeting of the North Carolina Dental Society adjourned.

The meeting then, at 1:45 o'clock p.m., May 6, 1931, adjourned.

OBITUARIES

HONORARY MEMBERS OF THE NORTH CAROLINA DENTAL SOCIETY

THOMAS PHILLIP HINMAN, D.D.S., Sc.D., F.A.C.D.

Dr. Thomas Phillip Hinman, born in Stratford, Canada, March 4, 1870. Died Atlanta, Georgia, March 19, 1931. Graduated from the Dental Department Southern Medical College, now the Atlanta-Southern Dental College, in 1891. He was a member of the faculty of his Alma Mater for thirty-nine years.

Dr. Hinman practiced his profession in Atlanta from 1891 to 1931. Was a Past-President of the Georgia Dental Society and the American Dental Association. He held honorary membership in several other Societies, including the North Carolina Dental Society.

Dr. Hinman was very active in the civic and business life of Atlanta and was a director of several business and social organizations.

He is survived by his widow and one son, Dr. Thomas P. Hinman, Jr.

DELOS LEMUEL HILL, D.D.S., F.A.C.D.

Dr. DeLos Lemuel Hill, born in Atlanta, Georgia, May 14, 1874. Died May 7, 1931. Graduated from the Atlanta Dental College in 1903, and was a member of the faculty of the Atlanta Dental College, later the Atlanta-Southern Dental College, from the date of graduation until his death.

Dr. Hill was supreme grand master of the Psi Omega dental fraternity and was President-Elect of the National Association of Dental Schools at the time of his death. He was an active member of the Georgia Dental Society and the American Dental Association. He was also a member of many honorary societies and honorary member of many State Societies, including the North Carolina Dental Society.

Dr. Hill did some outstanding work in helping to organize the Atlanta Rotary Club and was also an active member of the Methodist Church.

He is survived by his widow.

HENRY WOOD CAMPBELL, D.D.S., F.A.C.D.

Dr. Henry Wood Campbell, was born in Amherst, Virginia, July 9, 1866. Died Suffolk, Virginia, March 31, 1931. Graduated from University of Maryland, 1899. Practiced dentistry in Suffolk, Virginia, from 1899 to 1931. Served as President of the Virginia Board of Dental Examiners for 31 years.

Dr. Campbell held membership in Virginia Tide-Water Dental Society, Virginia Dental Association and American Dental Association, was Past-President of Virginia Dental Society. He was an honorary member of the North Carolina Dental Society. He took an active part in the business, civic, fraternal and religious life of his community.

He is survived by his widow and four children.

MEMBERS OF THE NORTH CAROLINA DENTAL SOCIETY

FIRST DISTRICT

*Dr. W. R. Aiken.....	Asheville
*Dr. A. D. Abernathy.....	Granite Falls
*Dr. C. M. Beam.....	Asheville
Dr. L. P. Baker.....	Kings Mountain
Dr. O. C. Barker.....	Asheville
*Dr. W. F. Bell.....	Asheville
*Dr. C. C. Bennett.....	Asheville
*Dr. A. P. Beam.....	Shelby
Dr. J. M. Cheek.....	Asheville
*Dr. J. F. Campbell.....	Hickory
Dr. H. H. Carson.....	Hendersonville
Dr. W. W. Carpenter.....	Hendersonville
Dr. W. K. Chapman.....	Sylva
*Dr. W. E. Clark.....	Asheville
*Dr. A. P. Cline.....	Canton
*Dr. Dean H. Crawford.....	Marion
*Dr. A. C. Currant.....	Gastonia
*Dr. E. M. Cunningham.....	Asheville
Dr. B. A. Dickson.....	Marion
Dr. F. W. Davis.....	Asheville
*Dr. H. C. Dixon.....	Shelby
Dr. E. L. Edwards.....	Morganton
*Dr. A. C. Edwards.....	Laundale
Dr. George Evans.....	Asheville
*Dr. P. R. Falls.....	Gastonia
*Dr. W. E. Furr.....	Franklin
*Dr. S. P. Gay.....	Waynesville
*Dr. I. K. Grimes.....	Asheville
Dr. J. L. Greer.....	Rutherfordton
Dr. O. H. Hester.....	Hickory
*Dr. B. F. Hall.....	Asheville
*Dr. C. Highsmith.....	Gastonia
*Dr. Lyman J. Hooper.....	Asheville
*Dr. Ralph R. Howes.....	Forest City
*Dr. F. L. Hunt (Life Member).....	Asheville
Dr. H. W. Jordan.....	Belmont
Dr. Edgar D. Jones.....	West Jefferson
*Dr. H. A. Karesh.....	Lincolnton
*Dr. A. A. Lackey.....	Fallston
Dr. O. Preston Lewis.....	Kings Mountain
*Dr. J. B. Little (Life Member).....	Hickory
*Dr. R. A. Little.....	Asheville
*Dr. E. D. Moore.....	Gastonia
*Dr. L. H. Mann.....	Asheville
*Dr. N. P. Maddux.....	Asheville
Dr. M. N. Medford.....	Waynesville

*Indicates members attending Winston-Salem meeting.

*Dr. O. S. Moore.....	Belmont
*Dr. W. J. Miller.....	Lenoir
Dr. O. L. Moore.....	Lenoir
Dr. C. B. Mott.....	Asheville
*Dr. S. E. Moser.....	Gastonia
Dr. Matt McBrayer.....	Rutherfordton
*Dr. Charles S. McCall.....	Forest City
*Dr. D. E. McConnell (Life Member)	Gastonia
Dr. W. J. McDaniel.....	Rutherfordton
*Dr. W. P. McGuire.....	Sylva
Dr. James A. Marshburn.....	Black Mountain
Dr. J. R. Osborne (Life Member)	Shelby
*Dr. George K. Patterson.....	Asheville
Dr. J. M. Parker (Life Member)	Asheville
*Dr. C. M. Peeler.....	Shelby
Dr. Cecil A. Pless.....	Asheville
*Dr. Hugh S. Plaster.....	Shelby
Dr. Ralph Ray.....	Gastonia
*Dr. W. C. Raynor.....	Newton
*Dr. John F. Reece.....	Lenoir
*Dr. H. L. Robertson.....	Cliffside
Dr. G. R. Salisbury.....	Mnphy
*Dr. I. R. Self.....	Lincolnton
Dr. J. A. Sinclair (Life Member)	Asheville
Dr. J. H. Smathers.....	Waynesville
Dr. S. H. Steelman.....	Maiden
Dr. Paul W. Troutman.....	Hickory
Dr. J. F. Whisnant.....	Henrietta
Dr. W. K. Whitson.....	Asheville
*Dr. L. E. Wall.....	Bessemer City
Dr. R. C. Weaver.....	Asheville
*Dr. C. T. Wells.....	Canton
*Dr. T. A. Wilkins.....	Gastonia
*Dr. P. W. Winchester.....	Morganton
*Dr. Frank R. Wilkins.....	Forest City
Dr. P. P. Yates.....	Lenoir
*Dr. C. B. Yount.....	Hickory
*Dr. J. A. Young.....	Newton

SECOND DISTRICT

*Dr. F. O. Alford.....	Charlotte
Dr. W. W. Abernathy.....	Charlotte
*Dr. P. Y. Adams.....	Statesville
Dr. Dale Arthur.....	Charlotte
Dr. C. L. Alexander (Life Member)	Charlotte
*Dr. T. I. Allen.....	Charlotte
*Dr. Fred Anderson.....	Winston-Salem
*Dr. John L. Ashby.....	Mount Airy
Dr. J. E. Banner (Life Member)	Mount Airy
*Dr. Carl A. Barkley.....	Winston-Salem
*Dr. J. R. Bell.....	Davidson

Dr. D. L. Belvin.....	Charlotte
*Dr. Grover C. Bernard.....	Kannapolis
*Dr. A. Mack Berryhill.....	Charlotte
*Dr. J. P. Bingham.....	Lexington
*Dr. S. B. Bivens.....	Charlotte
*Dr. C. E. Blackburn.....	Winston-Salem
*Dr. H. E. Blackburn.....	Walnut Cove
*Dr. A. R. Black.....	Charlotte
Dr. I. A. Booé.....	Mocksville
*Dr. Daniel B. Boger.....	Charlotte
*Dr. A. S. Baumgardner.....	Charlotte
Dr. J. D. Carlton (Life Member).....	Salisbury
Dr. John W. Carlton (Life Member).....	Spencer
*Dr. E. C. Choate.....	Mocksville
*Dr. E. G. Clicke (Life Member).....	Elkin
*Dr. W. J. Conrad (Life Member).....	Winston-Salem
*Dr. W. L. Cripliver.....	Lexington
*Dr. R. W. Crews.....	Thomasville
*Dr. W. Clyde Currant.....	Statesville
*Dr. Vernon H. Cox.....	Winston-Salem
*Dr. H. C. Daniels (Life Member).....	Salisbury
*Dr. S. C. Duncan.....	Monroe
*Dr. R. H. Ellington.....	Salisbury
*Dr. P. L. Feezor.....	Lexington
*Dr. R. C. Flowers.....	Winston-Salem
Dr. Burke W. Fox.....	Charlotte
*Dr. R. A. Frye.....	Pilot Mountain
*Dr. J. M. Gaither.....	Boone
Dr. W. D. Gibbs.....	Charlotte
Dr. J. H. Guion.....	Charlotte
*Dr. A. P. Hartman.....	Winston-Salem
Dr. Frank K. Hayes.....	Charlotte
*Dr. J. F. Hartness.....	Mooresville
*Dr. R. B. Harrell.....	Elkin
*Dr. Gary Heeseman.....	Charlotte
Dr. E. S. Hamilton.....	Charlotte
*Dr. J. F. Hall.....	Winston-Salem
Dr. H. C. Herring.....	Concord
Dr. Clarence R. Hutchinson.....	Walnut Cove
Dr. H. C. Henderson (Life Member).....	Charlotte
*Dr. H. R. Hege.....	Mount Airy
*Dr. R. H. Holliday.....	Thomasville
*Dr. D. W. Holcombe.....	Winston-Salem
*Dr. W. C. Huston.....	Concord
*Dr. J. M. Holland.....	Statesville
Dr. O. R. Hodgkin.....	Thomasville
*Dr. P. E. Horton (Life Member).....	Winston-Salem
*Dr. George C. Hull.....	Charlotte
Dr. W. A. Ingram.....	Monroe
*Dr. Ralph Jarrett.....	Charlotte
*Dr. R. H. Jones (Life Member).....	Winston-Salem
*Dr. O. L. Joyner.....	Kernersville

*Dr. F. G. Johnson.....	Lexington
*Dr. H. L. Keel.....	Winston-Salem
Dr. James L. Keerans.....	Charlotte
*Dr. Cyrus Clifton Keiger.....	Charlotte
*Dr. F. W. Kirk.....	Salisbury
Dr. W. L. Kibler.....	Charlotte
*Dr. O. B. Kirby.....	Charlotte
*Dr. A. R. Kistler.....	Monroe
*Dr. G. L. Kruger.....	Charlotte
*Dr. G. A. Lazenby.....	Statesville
Dr. Sam Levy.....	Charlotte
*Dr. W. C. Logan.....	Winston-Salem
*Dr. G. W. Marler (Life Member).....	Yadkinville
*Dr. Guy M. Mastin.....	Winston-Salem
*Dr. William F. Medearis.....	Charlotte
*Dr. E. Brown Morgan.....	Concord
*Dr. F. C. Mendenhall.....	Winston-Salem
*Dr. Daniel B. Mizell.....	Charlotte
*Dr. Rosebud Morse.....	East Bend
*Dr. D. O. Montgomery.....	Statesville
*Dr. T. Duke Morse.....	Winston-Salem
*Dr. J. A. McClung.....	Winston-Salem
Dr. A. W. Nance.....	Charlotte
Dr. J. M. Neel.....	Salisbury
*Dr. J. H. Nicholson.....	Statesville
Dr. H. R. Pearman.....	Cooleemee
*Dr. C. M. Parks.....	Winston-Salem
*Dr. R. M. Patterson.....	Concord
Dr. Ralph E. Petree.....	Charlotte
*Dr. John R. Pharr.....	Charlotte
*Dr. A. J. Pringle.....	Lawsonville
Dr. R. L. Ramsey (Life Member).....	Salisbury
*Dr. R. L. Reynolds.....	Lexington
Dr. B. C. Redfern.....	Monroe
*Dr. W. M. Robey (Life Member).....	Charlotte
*Dr. Grady L. Ross.....	Charlotte
*Dr. J. R. Secrest.....	Winston-Salem
*Dr. W. A. Secrest.....	Winston-Salem
Dr. Ralph Schmucker.....	Charlotte
*Dr. R. R. Shoaf.....	Lexington
*Dr. R. C. Spoon.....	Winston-Salem
*Dr. Harold E. Story.....	Charlotte
*Dr. L. A. Taylor.....	Winston-Salem
*Dr. W. C. Taylor.....	Salisbury
*Dr. W. A. Taylor.....	North Wilkesboro
*Dr. L. E. Taylor.....	Charlotte
*Dr. B. C. Taylor.....	Landis
*Dr. L. C. Thomas.....	Mount Airy
*Dr. LeRoy Thompson.....	Winston-Salem
*Dr. M. L. Troutman.....	Kaunapolis
Dr. L. P. Trivette.....	Mooresville
*Dr. R. D. Tuttle.....	Winston-Salem

*Dr. C. U. Voiles.....	Mooresville
Dr. V. V. Voiles.....	Mooresville
*Dr. G. E. Waynick.....	Winston-Salem
*Dr. C. H. Wadsworth.....	Concord
*Dr. D. T. Waller.....	Charlotte
*Dr. J. C. Watkins (Life Member).....	Winston-Salem
Dr. B. H. Webster.....	Charlotte
Dr. W. P. Weeks.....	Charlotte
*Dr. C. D. Wheeler.....	Salisbury
*Dr. T. P. Williamson.....	Charlotte
*Dr. K. M. Yokely.....	Winston-Salem
*Dr. J. W. Zimmerman.....	Salisbury
*Dr. C. F. Smithson (Life Member).....	Charlotte

THIRD DISTRICT

*Dr. A. J. Adams.....	Durham
Dr. C. A. Adams.....	Durham
*Dr. J. S. Betts (Life Member).....	Greensboro
*Dr. A. B. Bland.....	Durham
Dr. John H. Brock (Life Member).....	Burlington
*Dr. R. W. Brannock.....	Burlington
*Dr. Henry C. Carr.....	Durham
*Dr. Daniel T. Carr.....	Durham
*Dr. R. R. Clarke.....	Chapel Hill
*Dr. W. F. Clayton.....	High Point
Dr. L. G. Coble.....	Greensboro
Dr. R. S. Cole (Life Member).....	Rockingham
*Dr. J. Cecil Crank.....	Greensboro
*Dr. A. W. Cramer.....	Greensboro
*Dr. Leland M. Daniels.....	Southern Pines
*Dr. L. M. Edwards.....	Durham
*Dr. W. I. Farrell.....	Troy
*Dr. L. M. Foushee, Jr.....	Burlington
*Dr. H. Kemp Foster.....	Greensboro
*Dr. J. S. Frost.....	Burlington
Dr. J. M. Gardner.....	Gibson
Dr. Roscoe M. Farrell.....	Pittsboro
*Dr. F. E. Gillian.....	Burlington
*Dr. C. A. Graham.....	Ramseur
*Dr. George G. Herr.....	Southern Pines
*Dr. John N. Hester.....	Reidsville
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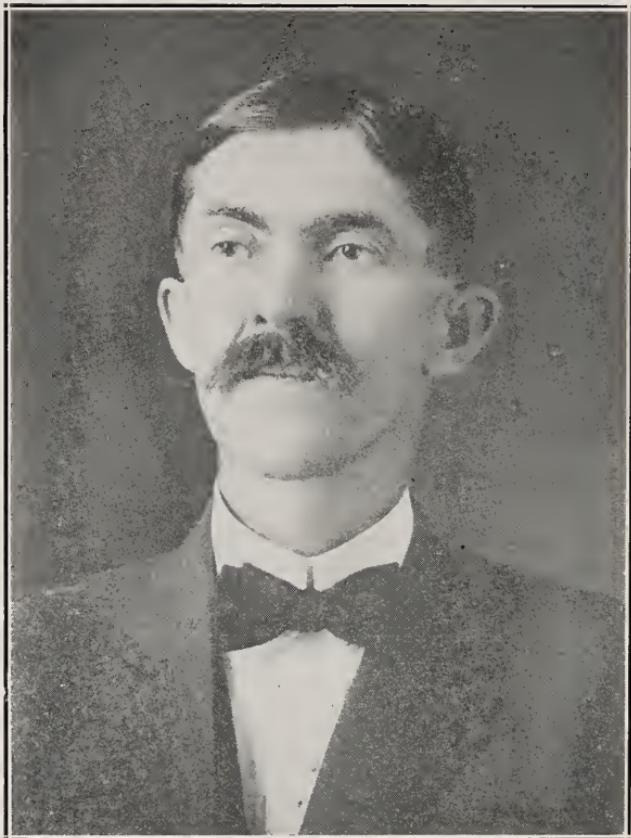
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who, by his sympathetic understanding of all dental problems, has endeared himself to every North Carolina dentist.

THE BULLETIN

....of....

THE NORTH CAROLINA DENTAL SOCIETY

VOL. XV

OCTOBER, 1931

No. 2

Entered as Second-class mail matter as a quarterly September 26, 1931, at the Postoffice, Raleigh, N. C., under Act of August 24, 1912

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EDITOR-PUBLISHER

DR. FRED HALE	Raleigh, N. C.
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We were particularly anxious that this BULLETIN carry the program of each of the five District meetings, and all other information, personal and professional, of interest to the profession at large and to the men in the respective Districts in particular. To this end your editor wrote many letters and sent some telegrams. The copy you now hold, of which your editor is not wholly satisfied, is the product of conscientious effort.

The BULLETIN is the publication of the North Carolina Dental Society—its pages are the open forum for the profession in this State to the men equally and without partiality. It is to be hoped that the membership will more freely use it for the advancement of the profession. We would like to have contributions from men more generally distributed over the State—original articles of scientific merit; articles pertaining to ethics; articles dealing with the executive and legislative problems affecting the Society; in short, any article that will increase our knowledge of Dentistry and Dental problems and better fit us to serve the citizens of our communities.

Your Editor-Publisher invites constructive criticism and suggestions that have as their aim the development of a better State Society organ. And by the same token he asks that you materially contribute to its pages.

EDITOR-PUBLISHER.

THE PRESIDENT'S MESSAGE

This will be my last opportunity before the District meetings convene this fall to appeal to the membership to show his or her interest in our Societies by attending the meetings. Your organization needs you, and you need it, and without putting forth much effort you can realize much more from your associations and the valuable clinical information than it can possibly realize from you.

Yes, I know the DEPRESSION is on; of course I do—it has hit every professional man, and every other type of business; but the wheels of progress must ever move forward. It behooves everyone of us to keep in step with progress, and no one should show a lack of interest because of slow collections; although the outlook for business may not be as bright as you would like it. We surely cannot improve conditions by continually thinking and talking of hard times. Let's forget our difficulties for a day or so and arrange to attend our respective District meetings.

You will be surprised to see how cheerful most of the men are going to be with which you may come in contact at your meeting. This cheerfulness may be attributed to several reasons. First, and most logical, is because of that old saying, "misery loves company." The second, is because the Program Committees have arranged the best programs since the State has been divided into Districts. The third, because of the good fellowship that exists amongst us. The other reasons are too numerous to mention, and are obvious.

We must look the situation square in the face. It is generally conceded that our mental attitude has a definite influence on our practice, and how could we better stimulate business than to create within ourselves an interest and desire to more efficiently serve humanity, forgetting our personal desires and hopes of the future. We cannot be better dentists by inactivity. We must attend our meetings if we expect to keep abreast of the times. We cannot build a real organization unless we individually and collectively contribute to its success.

I have never known any dentist who lives unto himself to contribute anything of value to the profession. And if we do not make the world in which we live just a little better for having lived in it; then we pass on without having accomplished but very little.

Now remember, brother dentists, your presence at your meeting will encourage others, and it will be most gratifying to the Program Committee and others who have helped with the affairs of the Society. So let's every single member put aside everything and attend our RESPECTIVE DISTRICT MEETINGS.

DENNIS KEEL, *President N. C. D. S.*

WHAT ARE WE GOING TO DO? ARE WE GOING TO
HAVE A BIG MEETING AT ELIZABETH CITY
IN MAY, 1932?

Now let's start off by saying, "Yes, we are going to have a big meeting in 1932" and let us all start planning for it now. The meeting will be just as well attended as you, the rest of the members, and I make it. Each individual must do his or her part for the advancement of dentistry in this Grand Old State. Every dentist should not only be proud of the privilege of living and practicing in North Carolina, but should consider it a great privilege and honor to be a member of the North Carolina Dental Society, a society that has an annual educational meeting that is not surpassed by any other place in the world.

The lectures we hear, the clinics we see and the friends we make can never be estimated in dollars and cents. If this one truth could be driven into the hearts and minds of every dentist in North Carolina, we would all be better dentists and happier ones. Speaking of happiness, have you ever returned from a society meeting that you were not glad you attended? It is and one should consider it to be of vital importance to himself and patients that he attend his State Society meetings regularly. Our patients all want us to go and they think more of us when we do go. Why? because they know we have attained a higher and more skilled knowledge of dentistry, and THAT'S NO BULL.

Let us all strive to make the 1932 State meeting the best meeting ever held, BY ATTENDING.

N. P. MADDUX, *Secretary and Treasurer
of the North Carolina Dental Society.*

DECISION OF THE SUPREME COURT OF NORTH CAROLINA WHICH HAS TO DEAL WITH PROFESSIONAL RESPONSIBILITY

On appeal, the Supreme Court, in June, 1931, reversed a judgment in amount of \$5,000 rendered by the Superior Court of Gaston County in favor of L. D. Ferguson v. Dr. L. N. Glenn, the facts and law in which case should be of interest to everyone.

During the year 1927, L. D. Ferguson was struck by a passing automobile while crossing a highway and suffered a broken leg in two places. Upon being carried to the hospital the injured man was cared for by Dr. L. N. Glenn, surgeon. After an elapse of several weeks the plaster cast was removed, whereupon it was discovered that one of the broken places had not reunited or knitted together, obviously due to an infection. The patient, however, was permitted to leave the hospital with instructions to return from time to time for treatment.

The patient testified in court that while he was at his home he discovered that the broken bones at the break just above the ankle were pressing upon the skin of his leg. After making this discovery he went to the hospital and consulted Dr. Glenn and was advised, after an examination, that the bones had not knitted together. The patient requested an operation if it would be helpful, but Dr. Glenn thought this unnecessary and so informed his patient, with further advice that he await further developments. The patient was dissatisfied and communicated with another doctor who took an X-ray picture and performed an operation. Patient was never able to walk without limping. In his suit against Dr. Glenn, negligence was alleged.

The Supreme Court of North Carolina said:

"After a careful consideration of all the evidence offered at the trial, as set out in the case on appeal, we are of opinion that it fails to show a breach of any duty which the defendant as a physician* and surgeon, owed to the plaintiff as his patient, or any injury resulting from defendant's treatment of plaintiff's broken leg.

"The law which seeks to be impartial, and to establish a just rule for both parties, prescribes the standard of duty which a physician and surgeon owes to his patient. The duty arises out of the relationship, which is voluntary and contractual in its nature. The law recognizes that medicine and surgery is both a science and an art, and requires

(* In its broad sense the term "Physician" includes a "dentist." *In re Hunter* 60 N. C., 372, also see *State v. McMinn*, 118 N. C., 1259, 1261, 24 S. E. 523.)

that one who professes knowledge of the science, and skill in the art, shall have such knowledge and skill as are ordinarily possessed by men of his profession, similarly situated. This is not all. He is required to exert his best judgment and use his best skill in the treatment of his patient. If he has fully measured up to these requirements of the law, he cannot be held liable for consequences which no human agency can ordinarily prevent. At best the science is empirical and the practice of the art subject to limitations. Neither justice nor sound policy requires that a physician or surgeon, although learned in his science and skilled in the practice of his art, shall be an insurer of his patient's recovery and restoration to his previous health and physical strength and condition.

"It is provided by statute in this State that no person shall practice medicine or surgery, or any of the branches thereof, nor in any case prescribe for the cure of diseases unless he shall have been first licensed and registered so to do as provided by law. Every applicant for license to practice medicine or surgery in this State must show that he is at least twenty-one years of age, and of good moral character. No license shall be issued unless the applicant upon an examination by the State Board of Medical Examiners, shall be found to have completed the course of study prescribed by statute and to have a competent knowledge of the subjects included in said course of study. It would seem to be at least a reasonable inference that a physician and surgeon who is duly licensed to practice his profession in this State, possesses that degree of knowledge of his science and the skill in his art, which is required by the law, and that degree of moral character which insures his best judgment in the professional care and treatment of his patient. At least, one who alleges to the contrary with respect to such a physician and surgeon, is and should be required to offer evidence to sustain his allegations. Otherwise, his action for recovery of damages alleged to have been caused by negligent and unskillful treatment, should be dismissed."

The North Carolina Industrial Commission has recently approved a fee schedule for dental service to injured employees, which is reprinted below:

Extracting each tooth without anaesthetic	\$ 1.00
Extracting tooth with anaesthetic	2.00
Extracting each tooth after first, same sitting.....	1.00
Extracting when chloroform or ether is demanded, in addition to physician's fee, one tooth to five.....	5.00
Each additional tooth to nineteenth tooth.....	1.00
Preparing mouth for denture.....	20.00
Bridge work, per tooth, abutments counting same as teeth, six anterior teeth	10.00
Bridge work, per tooth, bicuspids and molars.....	12.50
Inserting one tooth on rubber.....	10.00
Inserting each additional tooth to five teeth.....	1.00
X-rays, \$2.00 first picture, full mouth.....	10.00
Inserting full upper or lower set in rubber.....	25.00
Replacing one tooth on gold or rubber.....	3.00
Replacing each additional tooth, same heat.....	1.00
Lingual bar plates bent clasps.....	40.00
Reduction of simple fracture of jaw, with splint appli- cation, flat rate for full treatment.....	75.00

Any dentist desiring more complete information should write the North Carolina Industrial Commission, Raleigh, N. C., for a copy of their Bulletin, Vol. 1, No. 4, September, 1931.

COOPERATIVE SERVICE

By Z. L. EDWARDS, D.D.S., Washington, N. C.

*Read before group No. 2, Fifth District Society,
Tarboro, N. C., October 9, 1931.*

The benefits of gatherings of this type are two-fold.

In the first place, we usually learn something which is of value to us in the practice of our profession through the exchange of ideas, one with the other; in the second place, these meetings bring us in closer contact and help foster friendships long to be cherished and appreciated.

It is about this latter division, together with a few suggestions relative to our professional attitude toward one another that I wish to discuss with you for a few minutes tonight.

There was a time when members of any one profession in the same town were inclined to be hostile to one another. I have seen this happen in the case of physicians, of newspapermen, of lawyers and of dentists. There was a time when members of the same profession were jealous of one another and thought that they had to battle for their rights. You have seen the same thing happen in your own towns or in neighboring towns. I am deeply conscious of the fact that this situation may exist even to this day in some localities, although, personally, I believe it is on the wane. People in all walks of life have learned that more can be accomplished by pulling together than by pulling apart.

One of the most worthy efforts of our civilization during the last decade or two has been to bring about better understandings. This has been true of nations, of states, of communities and of individuals. We have various civic groups such as Rotary, Kiwanis, Lions, Civitans and others which help to promote closer fellowship. We have various fraternal organizations such as the Masons, Odd Fellows, Redmen, Knights of Pythias and Elks. And then, too, we have our business and professional groups. One of the principal objects of all these is to promote fellowship and friendship.

If the members of any organization need fellowship, it is ours; for it tends to make life much more pleasant and agreeable. In the event of two or more men practicing in the same city, greater good can be accomplished by working in harmony and feeling free to consult with one another. In order to create and maintain the proper professional spirit on the part of the members of any calling, there must be at all times an equitable dealing, one with another, in every relationship in which individual interests in any way come in contact.

One of the most concrete considerations in this connection arises when the regular patient of one practitioner falls temporarily into the hands of another. Because there are so many exigencies in life today this is happening with increasing frequency. People travel more than they did and they move about from place to place and it is nothing unusual for them to require minor service to the teeth when they are absent from home. This presents an opportunity for the practitioner to whom they apply to establish between himself and the patient's regular dentist a delightful comradeship by extending to the latter the professional courtesy of taking care of the emergency of his patient without a fee or, at least to do it at a very moderate one.

Of course, when this is done, emphasis should be placed upon the fact that the courtesy is being extended to the patient's dentist rather than to the patient himself. It is not well to lead a patient to believe that any dental service is not worthy of a fee, but it is well for the patient to learn that professional men find it within their prerogative and their pleasure to show a courtesy to one another, through the medium of gratuitous service to a patient. Invariably when this attitude is taken, it not only calls forth the gratitude of the patient, but it also increases his respect for all dentists as a class.

In case one of our fellow practitioners is out of town and one of his patients comes in our office with some minor trouble, why not limit our operations to the emergency at hand and then suggest to the patient that he return to his or her regular dentist for work of a more permanent nature when the latter returns to the city?

It sometimes happens that a patient through mistake will come to our office looking for a fellow practitioner who is located down the hall from us or across the street. Instead of expressing some doubt as to whether he is in town or not, why not do the charitable and fair thing by directing the patient to the other dentist's office, and thus prove to the patient that we are willing and anxious to render our professional brother a courtesy?

Another thing which we sometimes find is a great variation in fees charged. I realize the utter impossibility of having a standard fee for each and every operation, because of the variation of circumstances and conditions encountered, but I do feel that where there are two or more men practicing in the same town we should establish minimum fees for certain types of work such as bridgework, plate work, extractions and possibly others. Everyone knows that one of the most disastrous things that can happen in a community is a price-cutting war, regardless of whether it has to do with the price of gasoline, clothing, groceries or dentistry. The public has learned to be wary of such tactics because it has learned that in the end it will have to pay.

Another mistake that some of us sometimes make is to make derogatory comment relative to service that has been rendered a patient in the past. If a patient comes to us and we observe several fillings, and if it so happens that one or two of them are not up to standard, there is no need to make caustic comment about it and intimate to the patient that the dentist who did the work did not do a very good job of it. The patient doesn't appreciate any such remark. You may be referring to a very close friend of his. When this happens, every bit of the sweetness of professional relationship has been taken out of the transaction and the patient is left with the uncomfortable reflection that either the regular dentist has been remiss in his duty or that the new one has been dishonest in his criticism. Toward whichever horn of the dilemma the patient may lean, there is little increased respect for the dental profession. What might have been a beautiful demonstration of confidence and good will has been turned into a transaction of skepticism and suspicion, with a sinister aftermath to further besmirch it.

The advantage to be gained by the acquisition of a few paltry dollars through methods of this sort is infinitesimal compared with the damage that is done, and no man, who has any respect for the good name of dentistry will resort to such tactics.

No man ever has lost anything by adopting a policy of square dealing with other people. That applies to dentists as well as to everyone else. If the dentists would observe the principles of the Golden Rule in their transactions with one another, they would benefit themselves greatly,

in addition to placing themselves in a position to render greater service to the people of the community.

When the time comes for an appraisal of our efforts and accomplishments, we may be able to recall with much satisfaction our success in freeing humanity from some of its most glaring deformities, and in transforming the hideous imperfections of nature into the essence of symmetry and beauty. We may have waved the magic wand of our subtle art across the distorted features of little children, men and women, and presented them to the world perfect in the image of Divinity: we may have relieved the aching hearts of mothers and added to the joy and pride of loving fathers; we may have added to health, to beauty, to opportunity, to advancement: we may have snatched from many a sensitive child the horror of derisive sneers, planted in his or her heart the seeds of hope, confidence and courage; we may have, by our skill, molded the human countenance into lines as fair as those of Apollo and we may have changed the features of a freak into the profile of a god; yes, we may have accomplished all of these things and more besides, but what are they worth to us if we lose the respect of our fellowman? What have we gained if we are regarded as selfish and self-centered individuals, interested only in our own affairs? How are we to find any comfort or solace in the thought that despite our worldly gains we have lost that which money cannot buy—a place of honor in the community in which we live?

He is indeed a narrow minded and bigoted practitioner who will not take these facts into consideration. There is a verse in the Scriptures which instructs us to remove the beam from our own eye before trying to take out the mote from a brother's eye. It applies to the ethics of our profession. The first thing we should do is to study ourselves, individually, from an unbiased and analytical standpoint. Are we, ourselves, upholding the traditions of our profession? Are we practicing the principles of square-dealing, of courtesy and of true friendship? If we can answer those questions to our individual satisfaction, then let us turn our attention to the other members of our profession and see if we cannot help them to look at things from a loftier and more noble plane.

MINUTES OF CONFERENCE OF SCHOOL DENTISTS
AND NURSES—HEALTH BUILDING,
RALEIGH, N. C.

SEPTEMBER 28-29, 1931

The meeting was called to order at ten o'clock, Dr. G. M. Cooper, presiding.

Dr. James M. Parrott, State Health Officer, addressed the assembly on "*The Purpose of the Enlarged Program.*"

Dr. Parrott gave as the purpose of the enlarged program "the increasing of 'our' efficiency (that of the State Board of Health, the county health officers, the school dentists and nurses) in our work, which is the handling of school children through the teachers, the nurses, and last, but most important, the handling of the school children through the school dentists."

"It is time to reevaluate our idea of school inspections—to tremendously enlarge school inspections. It is necessary to undertake in these school inspections to examine the eyes, ears, nose and throat—to ascertain, in a very simple way, the kidney functions (by simple albumin and sugar tests)—to undertake to look into the tuberculosis suspect more thoroughly than we have heretofore. It is our hope to develop some simple form of tuberculosis test which may be applied by school dentists, school nurses, and teachers in doing these inspections. It is also time to understand the nutritional values—how far nutrition can be used as an index to the health of the child. The diet should be stressed as a cause of bad teeth, and as some physicians now believe mastoid, and sinus, and other diseases."

"The biggest single job of all is dental inspection. The entire school inspection revolves around the dentist." Here Dr. Parrott paid tribute to the enlarged vision of the dental profession and urged the school dentists to carry this enlarged vision into their own school inspections. He stated the tremendous importance of the dentists going beyond the inspection of the mouth alone and inspecting throats as well. He reiterated the importance of the dentist using his eyes in examining school children. He illustrated the importance of determining the child's state of health, and asked the dentist to examine as well as the teeth, the facial expression, the diet, the throat, the eyes (for redness or dullness), the nose (for discharge or redness), the ears (for deafness, discharge or odor).

(The nurse of course to do the albumin and sugar, and the tuberculosis suspect.)

Dr. Parrott stated that the function of the teacher is to *teach health*. The teachers are asked to take accurate rather than superficial measures and weights of children for two purposes:

1. To have a record of the child's actual height and weight.
2. (Which is of prime importance)—To *teach health* while weighing and measuring.

He called attention to the splendid opportunity for teaching health that the teacher has in this way. "Too often this weighing and measuring is done as a mere matter of routine, with no particular attention being paid to the child who is underweight, overlooking entirely that the motive behind this undertaking is to reach the underweight child, and to ascertain particularly his diet conditions. It should be remembered that home environment is not always an index to nutrition. A child from the wealthiest of families may be as frequently a sufferer from malnutrition as the child in the most poverty stricken home."

Dr. Parrott then called to the attention of the dentists and nurses the importance of enlisting the coöperation of local dentists and physicians as well as that of the Parent-Teacher Associations in putting on a successful health program. He stated that the active assistance and coöperation of the dental and medical professions is absolutely essential to a successful local health program, and the assistance of the Parent-Teacher Association is of inestimable value.

Dr. Parrott gave consideration to the keeping of adequate records and reports which are invaluable to the State Board of Health and to the schools and local organizations.

Dr. Parrott gave the policy of the State Board of Health which is absolutely necessary to all public health workers the world over, that

"Public Health is Not a Curative Agency."

However, it is sometimes necessary to teach public health by example and demonstration. To illustrate this point he named the tonsil and adenoid clinics which have been conducted for a number of years by the State Board of Health, but stated that these clinics have outlived their usefulness in *teaching health* and will no longer be a feature of the Board's activities.

"The correction of defects is a local responsibility and the local folks must be taught their responsibility. It is the function of public health workers to teach this responsibility, to arouse a health conscience, and to work up with the dentists and physicians plans for handling themselves the correction of these defects."

"It is the purpose of the State Board of Health to build a lasting program, their hope to build a service that will grow and expand to meet the demands of the future."

"We will not go to battle, we will go to war."

Dr. Cooper then introduced Dr. Verne S. Caviness, of Raleigh, who addressed the conference on "*The Function of the Internal Glands and Their Relation to Body Growth.*"

Dr. Caviness gave a most interesting lecture on the endocrine glands—their names—their location in the body—and their functions, particularly with regard to the building of bone and teeth by influencing the supply of calcium which is given off by the glands into the blood stream, with especial emphasis on the Thyroid and Pituitary glands.

Dr. Caviness took up each of these glands separately and described the functions of each.

Thyroid—(Enlargement of which is called Goiter). The Thyroid is most important of all the endocrine glands. It has strong control over mentality. Cretinism is traced to deficiency of the Thyroid gland, and Dr. Caviness here pointed out and illustrated the splendid opportunity for preventive medicine in children of this type.

The Thyroid gland controls eruption of the first teeth and their eruption is dependent upon this gland. He stated that irregular teeth, impactions, etc., may be traced to the Thyroid gland. The Thyroid gland controls iodin metabolism.

Pituitary—Controls not so much body functions as body growth and development. Enlargement of the Pituitary gland is very often responsible for the precocious child. It controls bone and body growth. It controls the erupting of the permanent teeth. In cases where there is subnormal activity of the Pituitary gland, the erupting of teeth will be greatly retarded.

Under-action of the Pituitary gland is responsible for dwarfs. In some cases, for underdevelopment mentally and sexually. Over-action of the gland is responsible for giantism, and for large teeth and bones.

Gonads—(Which are the sex glands—ovaries and testes). These glands control temperament and disposition and general body appearance. The sex glands also control erupting of teeth to a certain extent.

Thymus—Has a pronounced effect on calcium metabolism. Inhibitory in action against sex glands.

Suprarenal—Controls blood pressure.

Pineal—Dr. Caviness stated that very little is known with regard to the function of this gland other than that it controls the eruption of the molars. It disappears about the age of five years or thereabouts and is responsible for the shedding of deciduous teeth.

Pancreas—Controls starch metabolism in the body.

Parathyroid—(Tetany follows removal of Parathyroid glands.)

The Thyroid, Thymus, Parathyroid and Pituitary glands are absorbers of calcium. The sex glands are calcium secretors. After the age of infancy and childhood, in which the sex glands are inactive and the calcium absorbers are necessary for the building of bone and teeth, there must at all times be maintained a balance between these two groups.

Dr. Caviness gave some of the causes of disturbances of calcium as heredity, and diet, and stated that the glands are affected by acute infections. Disease depresses these glands, lowers their functions, and disturbs calcium, which in turn affects the teeth.

Dr. Cooper called on Dr. J. N. Johnson, Goldsboro, N. C., Dental Member of the North Carolina State Board of Health; Dr. J. Martin Fleming, Raleigh; Miss Blanche Lamb, Public Health Nurse of Greensboro and Guilford County; Dr. E. R. Hardin, County Health Officer, Lumberton, N. C.; Dr. E. A. Branch, State Board of Health; Dr. J. S. Betts, Greensboro; Miss Cleone Hobbs, State School Nurse; Dr. J. S. Spurgeon of Hillsboro; Miss Birdie Dunn, State School Nurse; Dr. R. F. Yarborough, County Health Officer, Louisburg, N. C., and Miss Juanita McDougald, State Department of Education, were also called upon and spoke briefly to the conference.

Meeting adjourned for lunch.

Mr. Warren H. Booker, of the State Board of Health, then spoke on "*How the School Dentist can Assist in an Enlarged Sanitation Program*." Mr. Booker explained that he had asked Mr. R. D. Beam and Mr. B. L. Jessup, of the Division of Sanitary Engineering, to assist him with this subject.

Following Mr. Beam's paper, Mr. Jessup discussed very briefly and to the point methods by which the dentists and nurses could assist in getting sanitary conditions improved and the enormous help they could be to the Division of Sanitary Engineering. He suggested that when in their school inspections they had a few spare minutes, that they stroll around the school grounds and see in what condition they are kept. If there is a water system a dentist or nurse cannot be expected to report on engineering problems, but they may certainly mention such a thing as a sand filter grown up in weeds.

TOILETS

"Visit toilets and see in what condition they are kept, and let us know here in Raleigh. If possible, get the idea over to the principal or county superintendent of schools that the responsibility rests upon them to see that the toilets are kept in a sanitary condition. Get them, together with the teachers, to visit the toilets and see for themselves in what condition they are maintained. Get them to visit the toilets at intervals and see that they are kept clean. Many times teachers and principals are unfamiliar with the existing conditions."

WATER SUPPLIES

"General inspection around wells, etc., will disclose whether they are fairly well protected against pollution. Seventy-five per cent of pollution in open wells is surface pollution. If it is possible to get the county superintendent of schools to have wells properly protected, we can best eliminate that pollution."

CAFETERIAS

"Most school cafeterias do not come under the Statewide Cafe Law, but whether or not they come under this law, they should be kept in a sanitary condition. See for yourself in what condition they are kept."

"The school dentists and nurses can be of inestimable value to the Division of Sanitary Engineering in furthering their work."

Mr. Jessup called to the attention of the dentists and nurses that the best way of getting health sanitation into the homes is through the school child. "We have no way of reaching the parents in the homes, but the school child we can reach, and he is of invaluable aid in carrying health sanitation teaching into the homes."

Dr. Cooper then introduced Dr. Aldert S. Root, of Raleigh. Dr. Root's subject was "*The Scope of Nurses' Examinations and Extent of Nurses' Follow-Up Work in School Work and in Maternity and Infancy Work.*"

Dr. Root stated that North Carolina's high infant morbidity and mortality rate is a thorn in the side of not only all public health workers, but also the physicians of the State who are doing their utmost in work with young children.

"Possibly per capita poverty in North Carolina has something to do with this death rate. The social status in North Carolina is low. We have ignorance and superstition to combat to a large extent, and we should strive for a better education of our boys and girls, and for general and better education as to care of children, particularly those children who are going through the formative period—that first two years of life—which is so important. Our function is to try to educate mothers as to the care of their babies."

"One-third of the school children in America are in a state of malnutrition. Thirty-three and one-third per cent of men volunteering for the late war were turned down on account of malnutrition, or defects caused by malnutrition. Any effective work against malnutrition must be done during the early life of the individual." Dr. Root stressed the importance of the care of the child through infancy.

"Every child from birth should have periodic examinations. This is of vital importance. It can either be done by clinics or by taking the child to a private physician. Every community should have free clinics for babies, either through hospitals, some agency such as the Junior Guild, Woman's Club, etc., where parents of indigent children may have them weighed, have feeding problems and general care discussed, as well as other problems."

"*Ninety-five per cent of the whole problem is nutrition.* Every child should have a diet which is well balanced. Breast-fed babies get a well-balanced diet, and we have been preaching for many, many years the importance of breast-feeding. It should be remembered, however, that *prolonged* breast-feeding is not to be desired and is an increasingly important problem."

"Breast milk is essential for the first three or four months of life. After this time, different elements must be added to the diet to take care of the increased needs of the child. *Prolonged* breast-feeding is a serious thing, as it deprives the child of additional

elements that he needs for his growth and development. In most cases, babies should be weaned before they are nine months old."

"*Index of baby's condition is gain or loss of weight.* Sick babies do not gain normally. Well babies should be weighed every two weeks—if not well, they should be weighed more frequently. During the first six months of life babies should be weighed every two weeks—during the second six months, once a month."

"At the age of five months, cereals and small amounts of cow's milk are added to feedings. It is well for the baby to become accustomed to cow's milk before the time for weaning him, as some children at first refuse cow's milk, and at the time of weaning this sometimes causes trouble."

"At the age of six months every child should have vegetable soup added to his diet."

Dr. Root gave the four vitamins:

A—which is contained in cream and cod liver oil.

B—which is contained in green vegetables and in yeast.

C—which is contained in citrus fruits such as lemons, oranges, etc.

D—which is contained in cod liver oil and yeast."

"Breast-fed babies get these vitamins, but it is necessary to supply them to all artificially fed babies."

"At the age of eight months, immunize the child against diphtheria. It is very gratifying that the death rate from diphtheria has decreased thirty-three and one-third per cent in the past ten years, since the widespread use of diphtheria toxin-antitoxin (and toxoid, which is sometimes used)."

Dr. Root also stated that dysentery had greatly decreased during the past fifteen or twenty years, which is partly due to the better education of the public to the importance of clean, safe milk, and the importance of keeping those children having dysentery from infecting other children.

Dr. Root stressed the importance of proper care of the child after the age of two years with particular emphasis being laid on good health habits, particularly as to habits of eating.

TUESDAY MORNING, SEPTEMBER 29TH

Dr. Cooper called the meeting to order—after which the following statement was made by Dr. Parrott:

"Lest some one might misunderstand, I would like to take this opportunity to explain again that this conference was called for

the purpose of increasing our efficiency—certainly not to take the place of the county health officers. In counties having whole-time health officers, they will act. In counties not having whole-time health departments, the State Board of Health will serve."

"We are trying to build up a more efficient organization for ourselves. When we go into a county in which there is a whole-time health officer, the health officer directs, but in a county in which there is no health department, we, of course, will direct."

"I am sure, too, that you will all realize that this is a new activity. We are asking that you bear with us and give us all the support and assistance possible. We feel quite confident that the health officers will help us and sympathize with us in our new endeavor."

"Also, lest there might be any misunderstanding, let me give you again the policy, or policies, of the State Board of Health":

"Public Health is Not Curative
Public Health is Not for Enforcement of Laws
Public Health is Only Part Promotional
Public Health is ALL PREVENTION."

General discussion followed.

Dr. Cooper then introduced Miss Hattie S. Parrott, of the State Department of Education, who, following a short talk, conducted a round-table discussion.

Miss Parrott stated that the education program is dependent upon the public health nurse and dentist.

"Health education is the big objective of all education. Children cannot succeed and progress in school unless they are well and happy—unless they are in a state of health which includes both mental and physical health and development. Teachers heretofore have not been utilizing all the material that has been available toward health education but are coming to realize the importance of securing every aid to health education."

"The most important problem to be met is that of the school beginner. The school child, of course, is reached after he starts to school, but the object of prime importance is to reach the child before he starts to school and better prepare him for his entrance. The State Board of Health has shown the way to better physical preparation, and for the past several years, the State Board of Health, State Department of Education and Parent-Teacher Associations have been coöperating in an enlarged program—the

Board of Health through preschool clinics; the Department of Education through Education Clinics including Beginner's Day Programs; and the Parent-Teacher Association through the Summer Round-Up of Children; all with the same objective, but with slightly different methods. The Department of Education is anxious that this coöperation be continued."

"The whole child must be considered in planning his program. He must benefit physically, mentally and socially by the teaching he receives in school. The Department of Education has recently established a Department of Child Health Education, the purpose of which is to coördinate the work of the home, the school, and the community. To get the parent and teacher to coöperate on a twenty-four hour program for the child. To teach the parent and teacher to work together for the child's good and to give them some idea as to the all-around development of the child."

Miss Parrott stated that the parent and the teacher are responsible for the child's attitude toward health—as to whether or not he desires to be healthy.

Dr. John B. Wright, President-Elect of the North Carolina State Medical Society, addressed the assembly on "*Throat Conditions.*"

Dr. Wright called to the attention of the dentists and nurses the importance of frankness and honesty in dealing with children, stating that these were points that were frequently overlooked. He also called attention to the fact that the object of all health workers is a well-developed future citizenship—that it is our responsibility as to how they are prepared. Whether they have the best of preparation or not depends on us.

"In regard to tonsils, sometimes it is to be feared that we are in too much of a hurry. Sometimes it is to be feared that we are overlooking the many ramifications in the development of childhood. While I do not want to intimate that there are not many cases in which it is absolutely necessary for a child's growth and well-being to remove the tonsils, that infected tonsils are not one of the most prevalent hindrances to physical development of the child, their removal is not always imperative. We are moving at such a rapid rate that it is hard for us to keep pace with our developments."

Dr. Wright gave an illustrated description of tonsils and adenoids, and gave two rules for advocating tonsillectomy:

"Don't advocate unless tonsils are so enlarged as to obstruct breathing and proper development, or, unless they are infected."

Dr. Wright stated that history of repeated tonsillitis is very important in this second case—that the bounds of prudence are overstepped in advocating removal of tonsils without obtaining full history.

Dr. Wright stated that the inspections of school dentists and school nurses is a great and constructive work.

Dr. L. B. McBrayer, Secretary of the North Carolina Tuberculosis Association, Southern Pines, N. C., discussed the "*Etiological Factors of Tuberculosis*." His notes on this subject follows:

ETIOLOGICAL FACTORS OF TUBERCULOSIS

1. Tubercle bacillus. No tubercle bacillus—no tuberculosis.
2. Ancillary, synergistic or contributing factors. The tubercle bacilli is more or less ubiquitous.

For all practical purposes the tubercle bacillus that infects another person comes from the lungs of a person who has tuberculosis, sometimes called a spreader. There are sufficient number of exceptions to prove the rule, for example, bovine tuberculosis, which is transmitted to the human through cow's milk and yet the udder of the cow is not often affected, but it is supposed that the tubercle bacillus gets onto the udder and teats through the manure, dust and perhaps in other ways, and into the milk during the process of milking. Bovine tuberculosis is found more often in children than in the adult. Speaking from memory, some one has stated that not more than seven per cent of the cases of tuberculosis in children are of the bovine type, and this usually in the glands or bones, and with every dairy herd in North Carolina tuberculin tested and reactors killed, with an increasing amount of milk pasteurized, that low percentage should be lowered.

Then the human type may be transmitted from broadcasting to receiving station by dust from room, clothing or street. Though sunshine will kill the tubercle bacillus on the street or anywhere else in from one to four hours. In a study we made of a village in this State where there were sixteen times as many deaths annually as the death rate of that period, house infection did not prove to be a factor of importance and we believe that this is generally agreed to at this time.

The common drinking cup is supposed to be one method of transmission, though with present day knowledge we are led to believe that it requires massive numbers of the tubercle bacillus in oft repeated doses to produce the disease, and that means that

our forces of resistance or our armies of white blood cells and our block houses, the lymphatic glands, can handle and destroy a large number of these bacilli and thereby prevent the infection from becoming disease up to a certain point. Just how many or how oft the dose must be repeated to produce the disease in human beings is not known to a nicety, though for experimental animals—guinea pigs, rabbits, etc., the dose of a strain of given virulence is quite well known.

So that for working purposes it is now considered that practically all cases of tuberculosis, certainly a very large majority of cases, are caused by contact, close contact with an open case of tuberculosis and by open case we mean one who expectorates tubercle bacilli, and with a case that does not observe strictly the hygiene of tuberculosis. For example, a grandmother who had an open case of tuberculosis moved into the home of her son who had three children, two girls aged one and three years, a boy aged ten. The year-old crawled around on the floor and on her grandmother's bed and was generally in the room with the patient. The year-old died at twelve years of age. The three-year old stayed in the room with the grandmother most all the time, but was walking. Died at fifteen. The boy worked in the field with his father and played out of doors some of the time, but slept in the room with the patient and the same room was used as a living room for the family. The ten-year-old died at age thirty. All from pulmonary tuberculosis.

So we may add another slogan. No tubercle bacillus—no tuberculosis. No contact—no tuberculosis.

Evidently then the important thing to do is break the contact. Certainly when we have found a case of tuberculosis the important thing to do is to break the contact of that patient with other people, particularly with those of his own household, and particularly the children.

Again it becomes plainly necessary to find the cases. No tubercle bacillus—no tuberculosis. No contact with spreaders—no tuberculosis. Find the case. Break the contact.

How do we find the cases? Annual examination, not only teeth but lungs and a general and complete physical examination. We are not getting along as well with our annual physical as you dentists are with your annual dental examinations, and until that becomes both custom and habit, we must have tuberculosis clinics.

Here is a fact that will probably surprise you: the most effective way to find the adult cases is to find the children who are

infected and follow into their homes and you will find the adults who infected them. Then break the contact.

There is one other contributing factor that should be mentioned—lack of proper nutrition. Our people and particularly our children, are in greater need of a balanced diet, than are our nation, state and smaller governmental units in need of a balanced budget.

In tuberculosis the fat and the lean have tuberculosis and it seems from clinical observation that a well-nourished individual can and does contract tuberculosis just about the same as an undernourished individual, and yet the same clinical observation proves that one out of every four persons 25 per cent underweight has tuberculosis.

Then in the treatment of tuberculosis clinicians are agreed that the patient must be fed a well-balanced diet and sufficient in amount to keep the body cells in normal condition and in addition enough to take care of the normal body waste and repair, plus enough to offset the waste caused by the toxemia and destruction of tissue of the disease.

In the repair of a diseased focus caused by the tubercle bacillus the body needs calcium to mix in with other things and produce a hard and finally an almost solid encasement for the tubercle bacillus, this is called a tubercle, this is the same calcium that the body uses to produce a hard, beautiful and useful tooth.

We now know enough about tuberculosis to control it and drive it from North Carolina and the United States as we have Yellow Fever. In making this control complete the City and County Health Department must and will play an important part, and without such organization perfect control of tuberculosis is impossible with our present knowledge.

One of our old slogans which Mr. Booker and Dr. Cooper know is:

Every person who has tuberculosis has a right to know it, to be so treated that he will have the best opportunity possible for recovery, and so supervised that he will not communicate the disease to others.

Summary:

No tubercle bacillus—no tuberculosis.

No contact with spreader—no tuberculosis.

Find the cases.

Break the contact.

Balanced diet more important than balanced budget.

Following this paper Dr. Cooper called on Dr. P. P. McCain, Superintendent of the State Sanatorium for the Treatment of Tuberculosis, Sanatorium, N. C., who made a short talk.

Dr. McCain spoke of the splendid coöperation they had received from the teachers in health work.

"The health officers, of course, we expected to coöperate with us in our clinics for children. However, we were a little afraid that the teachers would feel that we were interfering with their work. We have had excellent coöperation and the work has been made possible because of this splendid coöperation of health officers, and teachers, and in some sections, by the physicians who have helped with the examinations."

"We find that a great many children who have positive tuberculosis tests have, as well, other defects. If these defects are taken care of the tuberculosis will not amount to very much. There is not much danger, if all these defects are corrected, of this child developing tuberculosis. The problem is to find the child who has positive tuberculosis test and to teach the parent and the teacher that whether or not the child develops tuberculosis will depend upon proper diet and care and correction of defects."

"It is the law in North Carolina that all cases of tuberculosis be reported to the Sanatorium, from which literature on proper care, etc., is sent to the cases. We are asking that physicians, etc., who discover cases of tuberculosis report them to the county health officer who in turn will report them to the State Sanatorium, thus giving the health officer the opportunity for visiting the cases and discussing with them personally proper, diet, care, etc., rather than simply sending literature."

Dr. John H. Hamilton, of the State Board of Health addressed the assembly on the "*Necessity for Mouth Health Education in a County Health Program.*"

Dr. Hamilton called the economic aspect of disease to the attention of the conference.

"The average person loses about two weeks each year through illness. The loss in production of these people would total \$1,250,000,000. Medical care would equal another billion. In considering these facts we get some conception of the economic phases of disease."

"The decayed tooth is portal of entry for disease. Organisms cannot gain entrance to the body through healthy mucous membrane. They must enter the body through diseased mucous membrane, and the diseased tooth is the first place which has contact

with germs which enter through the mouth—(as most of them do)—and thus makes an excellent portal of entry for these germs into the human body.”

“During the last few years health workers have been very much alarmed over the increase in what we speak of as the degenerative disease—heart disease, kidney disease, and cancer. More deaths are caused by these diseases than by all the infectious diseases.”

“Those of us who have studied medicine realize that there is a much closer relation between heart disease and diseased teeth than is sometimes supposed.”

“The causes of cancer, of course, we do not know much about. However, there is undoubtedly a certain amount of cancer which originates from local irritation, and as we frequently have cancer of the throat and mouth, we can blame a certain amount on diseased teeth.”

“We frequently have cases of deafness which are the result of focal infection. We have cases arising from focal infection by the teeth.”

“The importance of teeth in the practice of obstetrics is now generally recognized by all competent obstetricians.”

Dr. Hamilton told of a study recently conducted by Metropolitan Life Insurance Company of two thousand people, one thousand with healthy mouths, and one thousand with diseased mouths :

<i>Per cent suffering from:</i>	<i>1,000 Healthy Mouths</i>	<i>1,000 Diseased Mouths</i>
Headache	1.9	3.2
Boils—Furuncles	2.4	4.5
Neurasthenia and Neuritis	3.8	8.3
Nervousness	1.7	4.5
Colds	19.8	23.8
Abscesses	2.6	4.5
Albuminuria	0.9	3.3

“*Economic effect of dental disease on the school child.* (Smaller percentage of repeaters in carrying out school health program where dental program is one of salient features.)”

“In the Atlanta schools before they inaugurated their public health program 12.9 per cent were repeaters. Three years after starting health program 5.5 per cent were repeaters.”

Dr. Hamilton stated that there was one experiment that he had wanted to try before he left local health work, and that was to select 100 pupils outstanding in their work, and 100 pupils who had failed, have them examined by some disinterested physician, for the purpose of ascertaining if this study of two hundred children would not show that those children nearest fit would not also be the ones who excelled in their work, and if those having defects were not correspondingly those who failed in promotion.

Dr. Hamilton asked Dr. Hege of Forsyth County for a statement regarding work of a similar nature which has been conducted in Forsyth County and which the Health Department there intends to make every year.

Mr. J. W. Kellogg of the State Laboratory of Hygiene, gave a list of the service which is available from the Laboratory in making analyses, cultures, etc., and stated that the nurses and dentists have an invaluable opportunity in checking up the children who are abnormal in any way. It is often by having laboratory examinations made that a definite diagnosis may be arrived at.

Meeting adjourned.

(Editor's Note:—Dr. Wm. B. Dewar read a paper on heart diseases which we hope to include in a later edition. Mr. Warren H. Booker and Mr. R. D. Beam read papers on sanitary problems which we also hope to include in a later edition.)

TO DENTAL MEMBERS OF COUNTY BOARDS OF HEALTH

Dear Doctor:

You have recently had a letter from Dr. J. N. Johnson, Dental Member of the State Board of Health, urging you to attend your District Meeting. I hope you are arranging to do so. The North Carolina Dental Society always has coöperated with the State Board of Health. Due to the recognition given us, organized dentistry wants to render its best service. There has never been a time when mouth health education was needed more and the teaching of it was more opportune than the present.

The whole dental plan of the State Board of Health is undergoing constructive change and we need your counsel and the benefit of your experience. Some time during your District Meeting there will be a conference of Dental Members of County Boards of Health, a round table discussion of the work to be done by the

Dental Division of the State Board of Health in coöperation with the County Health Departments.

Of the 850,000 children in schools in the State last year, the dentists in this department treated the teeth of 40,580 children.

Do you think this too many?

What has been done for the other 810,000?

Should we confine our work to the first, second, and third grades?

How are we to get the family dentist to do children's work?

What are we to do for the middle class who can pay a reasonable fee?

What is to become of the indigent poor who cannot pay anything?

Who is to work for them for their health's sake?

Meet us at your District Meeting and let's give our work serious consideration.

Sincerely yours,

ERNEST A. BRANCH, D.D.S.,
Director, Division of Dentistry.

Editor's Note:—This letter is reprinted for the information and guidance of the Dental Profession in North Carolina. Study it carefully.)

OUR DISTRICT MEETINGS

The time is drawing near for the Annual District Meetings of the North Carolina Dental Society. Before another BULLETIN is published all the District Meetings will be history.

What have you done as an individual to help make your District Meeting a greater success? If you have not done anything what are you going to do? It may be that you are one of those who has criticised the programs and the meetings, in general, heretofore; because they were not just what you thought they might have been. If so, have you offered any suggestion as to how the program and the meeting might be improved? Have you given a clinic or prepared a paper that would add to the program? Or have you been one of those who has been satisfied to make excuses for neither giving a clinic nor preparing a paper? Have you criticised the other fellow who has really made an honest effort to do something worth while?

If your District Meeting is to be of mutual benefit you must put forth your best efforts to help make it so. What can you do to make your meeting more beneficial? The least you can do as

good loyal dentists is to attend your District Meeting and give your assistance in as many ways as you can. You should take part in the discussions and deliberations. You should vote in all elections and on questions that pertain to the welfare of the organization. You cannot perform these duties and stay away from your District Meeting. You will not be in a position to even criticise the meeting intelligently if you do not attend. You certainly will have no right to criticise it, if you do not avail yourself of the opportunities you have to help make your District Society Meeting just such a meeting as you would have it to be.

My appeal to you as individual dentists is: give your best efforts to your District Society. If you as individuals give your best efforts to your District Society this year, our President of the North Carolina Dental Society will have no cause to worry, for you in turn, will give your best efforts to the State Society.

Why not get an application for membership in the North Carolina Dental Society from that fellow dentist in your town, who for one reason or another is not a member? He may be waiting for you to invite him to join. If he is ethical, you should invite him to become a member of the Society. The opportunities offered him by the Society, if accepted, will make him a better dentist and will make dentistry better in your town.

The spirit of depression that permeates the very being of our people from the most exalted to the most humble, makes it imperative that those of us who love our District Society, and have its welfare at heart, uphold its officers and give them one hundred per cent coöperation. If we do this, we will not lose members on account of the depression, but will receive new members, because, at this time everyone realizes the great need of closer coöperation.

Mark the date of your District Meeting off of your appointment book now. Don't let anything come between you and your duty to your District, to yourself, and to your patients. You owe it to yourself, to your District, and surely to your patients to be present at the next meeting. You cannot attend a meeting of dentists where dentistry is talked and taught, without going back to your office, to those you are called to serve, a better dentist, capable of rendering better service.

WILBERT JACKSON, D.D.S.,
*President-Elect North Carolina Dental Society
Director of Districts.*

DISTRICT SOCIETIES

All members are urged to attend their District Society meetings, and are given a cordial invitation to visit any District meeting in the State.

FIRST DISTRICT DENTAL SOCIETY

By RALPH A. LITTLE, D.D.S., Asheville, N. C.

The First District under the able leadership of Dr. N. P. Maddux assisted by his efficient program chairman, Dr. A. D. Abernathy, is making good its slogan of, "The First District First." Due to his efforts and inspired by the District meeting held at Rutherfordton, at which ninety per cent of the membership were present, they have formed there a local Society that meets regularly and has to date resulted in adding six new members to the State Society.

Our next meeting, to be held October 15th and 16th at Lenoir, N. C., has a full program. Papers and clinics by Dr. Harrison and Dr. Swenson of Richmond, Va., and Dr. Mizzell of Charlotte, N. C., together with ten local clinics go to make up the most interesting and instructive program this Society has ever had.

Be assured that interest is not lacking in the West, and we truly believe in our boast that the "First District is First." Due credit should be given to Dr. Moore and Dr. Reid of the local committee, who worked hard to perfect this program. Programs have been mailed to all ethical dentists in Western North Carolina and a large attendance is expected.

SECOND DISTRICT DENTAL SOCIETY

WHY DENTAL ORGANIZATIONS

L. R. THOMPSON, D.D.S.

Efforts to organize dentistry were not successful until 1893, when Horace H. Hayden and Chapin A. Harris, both of Baltimore, organized the Baltimore College of Dental Surgery which was the first Dental College in the world. Since that time the number of dental colleges has rapidly increased. With them came the increase in requirements and advanced sciences.

Space will not permit me to go into a tiresome history of dental organizations for the practitioner, but, today, we have the International Dental Congress, the American Dental Association, the State Dental Societies, and the District Dental Societies. Membership in all these organizations only costs \$12.00 per year. (Second District.)

Why These Organizations? Let me quote a part of an address made by Dr. Thomas Tillebrown at a meeting held at Old Point Comfort, Virginia, in 1897.

"Organization is essential to the success of any movement in which the combined effort of several individuals is desired.

"It converts the irresponsible mob into the disciplined and responsible army. It is the flywheel of progress which gives balance to combined effort, brings up and pushes forward the laggard of conservatism, restrains the erratic flight of the too exuberant enthusiasm of the reformer, gives steadiness to action, and makes advancement sure.

"An association of persons for the promotion of scientific investigation is but a small municipality, and demands the same organization for its successful advancement.

"The value of the professional organization today is not simply bringing together the great, the good, and the wise to exchange congratulations on what the few know more than the many, but in order that the many may meet the few and that knowledge, culture and refinement and a true professional spirit may be more widely diffused and better appreciated."

Organization is even more important today than back in 1897. How many times in the past few years has the North Carolina Dental Society saved the dental laws of North Carolina?

Time after time shrewd politicians have tried in vain to let down the bars to incompetent practitioners, only to be met on the floor of the Senate chamber by Dr. J. Martin Fleming, Dr. E. B. Howle, Dr. J. N. Johnson and others with telegrams of protest from all parts of North Carolina. It is needless to say that our laws remain the same.

The Dental Societies, at their annual meetings, get some of the outstanding men of the State and nation to present new and old dental subjects.

This year the Second District Dental Society Program—Clinic Committee, composed of William F. Medearis, Chairman; S. B. Bivens and R. M. Patterson, is presenting a very attractive program. To date the program isn't complete, but, if you will study

this sketch, you will realize that you cannot afford to miss the meeting, November 16th and 17th at Concord, North Carolina.

"Radiographic Interpretation and Diagnosis"—Dr. J. T. O'Rourke,
Dean of School of Dentistry, University of Louisville.

"Mouth Lesions Involving Both Soft and Hard Tissues"—Dr.
M. S. Aisenberg, Assistant Professor of Bacteriology and
Pathology in the School of Dentistry, University of Maryland.

"The Opportunity for the Dental Profession to Further Dental
Health Education"—Dr. J. N. Johnson, F.A.C.D.

"Vincent's Infection"—Dr. Wallace D. Gibbs.

"Impacted Teeth"—Dr. Harold E. Story.

"The Periodontal Pocket"—Dr. Dan Mizzell.

"Amalgam"—Dr. Fred Hall.

TABLE CLINICS

"Inexpensive Gold Inlay Technic"—Dr. C. D. Wheeler, Salisbury,
N. C.

"Amalgam Technic"—Dr. D. E. McConnell, Gastonia, N. C.

"Practical Orthodontia"—Dr. Harry Keel, Winston-Salem, N. C.

"Amalgam Instrumentation"—Dr. Fred Hall.

The Second District Dental Society is only ten years old, and as we look back from year to year and see the progress our District has made we are very proud of it. Our membership has increased each year, and we now have one hundred and twenty-eight members in good standing. We are trying to increase our membership to one hundred and fifty this year by trying to get back some of our old members who have been suspended. We have a very enthusiastic Membership Committee who are doing great work in our District.

The last annual meeting held in Salisbury was the best meeting that the Society has had since its organization. The attendance was good throughout the meeting. There were a large number of visitors who seemed to enjoy our meeting. The Program Committee for this year are putting a lot of time and interest on our program and I am sure that we will have a better meeting than ever before. They are securing clinicians and essayists from the

most outstanding dental schools in the South, and also as many papers and clinics as they can secure within our District. On our previous programs we have been having a clinician representing one of the Districts. I think it would be a very good idea for every District to have a representative from other Districts to appear on their program.

Our District has a group of very enthusiastic members who are willing to do their part, and whom it is a pleasure to work with. Then we have a bunch that I would consider back-row sitters who do not take very much interest in our programs and meetings. I would like to see every member in our District and all Districts be interested in the meetings and to attend every one that is possible, for I am sure they all are very helpful in the promotion of the standards of dentistry. To the Second District Members—
LET'S TURN OUT TO OUR NEXT DISTRICT MEETING WHICH WILL BE HELD IN CONCORD, N. C., ON NOVEMBER 16TH AND 17TH WITH 100 PER CENT ATTENDANCE.

FRED HALL, D.D.S.

Winston-Salem, N. C.

THIRD DISTRICT DENTAL SOCIETY

SOUTHERN PINES CONVENTION

E. M. MEDLIN, D.D.S., Aberdeen, N. C.

I am neither a speaker nor a writer, but as we used to say in college days: just a poor boy struggling to get along. However, I would make a stab at anything for the fellow who asked me to write this article in regards to the coming eleventh annual meeting of the Third District Dental Society in Southern Pines, November 30th-December 1st.

There is no place in the District more ideal or more amply able to take care of this meeting. Located in the heart of the Sandhills near Aberdeen and Pinehurst with magnificent roads leading into it from every direction. There are a large number of hotels which can take care of all that come and at most reasonable rates. Southern Pines is considered the nation's winter home and playground, where one can forget their business cares and engage in any of the sports under the mid-winter sunshine, with the smell of pine in the air. A visit to Southern Pines and the Sandhills for a couple of days will be worth while not considering the convention.

To start the meeting off with a bang, there will be a golf tournament on No. 1 course, Southern Pines Country Club at 1:00 o'clock, Monday, November 30th. This layout is one of the most noted below the Mason-Dixon line, and will give you a test of every shot in your bag, and a good many words in your vocabulary. All of you in Third District who play golf, please write me that you will enter. Those of you who do not win a prize will carry home memories of a thrilling round of this popular game. Members who do not play golf can engage in other sports, tennis, archery, African dominoes, etc. Two miles from Southern Pines on the double boulevard to Pinehurst there is located one of the country's finest greenhouses, who make a specialty of orchids. The management has kindly offered to take the dentists and their wives through free. So fellows, let me urge you to bring your wives and sweethearts to this meeting, not both however.

Monday evening at 6:00 p.m., November 30th, there will be a banquet at Southern Pines Country Club, price \$1.00. The program committee were most fortunate in securing for this meeting Drs. Dement and King of Atlanta, both prominent in their specialties, namely: Periodontia and Crown and Bridge work. They will present these subjects from the standpoint of general practitioner. In my opinion there are no two phases of dentistry more interesting unless it be Radiodontia. There will be a number of table clinics given by local societies competing for the plugger cup.

What I have been trying to say is that we want a 100 per cent attendance from the Third District and many visitors from the other Districts, to come to Southern Pines. We local dentists will spare no efforts to show you a good time.

The Third District Dental Society will hold its eleventh annual convention at Southern Pines, November 30th-December 1st. Headquarters will be at the Park View Hotel and the rates are from \$2.50 down. Owing to the fact that there is no ballroom at the Park View, we are holding our business session in the ballroom of the Southern Pines Country Club.

We have been searching for men who would prepare the most valuable papers and clinics and we believe we have them. Dr. R. L. Dement of Atlanta will bring us a paper and clinic on Periodontia. Dr. Dement has been specializing in this field for fifteen years and is considered an authority on this subject.

Dr. A. L. King, also of Atlanta, will give a paper and clinic on Crown and Bridge. Dr. King is highly recommended on this sub-

ject. We are anxious for not only all the men in the Third District to avail themselves of this rare privilege, but we extend a very cordial invitation to all members of the N. C. Dental Society to come share with us.

At 1:30 p.m., November 30th, a golf tournament will be held and we are very anxious for all golfers to be on hand and enjoy the splendid Southern Pines course. We hope no lover of golf will miss this opportunity. Any information regarding this tournament can be had by writing Dr. E. M. Medlin, Aberdeen, N. C.

At 6:30, we plan to have a banquet at the Southern Pines Country Club and following this Drs. Dement and King will give papers.

At this time of general depression and discouragement, we feel we should have a well-rounded program, and we are confident we shall succeed. Owing to our place of meeting, our sports will be delightful. Our home clinics will be well worth the trip and our visiting clinicians are men of experience and ability.

The Moore County men are showing a wonderful spirit of co-operation, so let's show them our appreciation of their efforts by turning out 100 per cent attendance. H. C. CARR, D.D.S.

Durham, N. C.

FOURTH DISTRICT DENTAL SOCIETY

WALLACE F. MUSTIAN, D.D.S., Norlina, N. C.

President, Fourth District Dental Society

Fellow Dentists of the Fourth District Dental Society, Friends:

Your officers and committees have labored hard and consistently during the year to keep the old standard up to the highest mark. The old banner has been flying pretty high of late. You deserve commendation for your sincere coöperation.

I want to thank all officers and committees for their endeavors and especially our most efficient Secretary-Treasurer who has consistently and diligently worked to maintain membership during most trying times. I am happy to state that Sam Bobbitt has not only maintained the old number but has actually increased the membership. This was possible by your coöperation of course.

Again much credit is due our Program Committee who has prepared the best program in years for your inspiration and enjoyment.

May I state at this time that your treasury is in better shape than in many years as you will observe in the Secretary-Treasurer's report. For us to maintain this standard in the future may I insist that you pay your dues promptly, at the November meeting if possible. Plan to do this now! Thereby helping the hardest worked fellow in the society, your Secretary-Treasurer. Your society is in position to do much constructive work and each of you should feel that this is your organization. If things don't go right work—don't complain and by all means don't get out of the society.

Briefly, I am going to discuss three important subjects which the dentists of today are much interested in, great interest has been shown lately in their solution. May I discuss them possibly from a different angle than heretofore. I will mention the relationship of the dentist and physician, your local society and post-graduate study.

Would you send a patient to a physician with instructions to take her appendix out? Of course not. Certainly we would not be so aggressive. On the contrary; our side of it: A physician often sends a patient to us with the explicit instructions to extract a certain tooth or teeth, or to execute a specific operation, why the answer is for you. If I were to refer a patient to another dentist or medical practitioner for a certain professional service I would instruct him and say that I don't know just what the doctor's diagnosis will be nor how he should go about the operation, but I am sending you to a doctor in whom I have great confidence. Do as he tells you.

I believe we can bring about this better understanding by feeling with the medical practitioner in years to come through the young man or recent graduate in medicine and dentistry. There seems to be a better and closer association and spirit of confidence between the medical and dental undergraduate today than at any time in history.

There are fewer independent dental schools today than ever before. This fact coupled with our higher pre-dental educational requirements is bound to lend itself to better and more friendly relations. In fact this is a problem that only time and patience will solve. Everyone who has made a study of it is very much encouraged in the newer spirit of coöperation and fellowship that is beginning to be prevalent today. Our mutual object should be for the welfare of our patient.

In fact the future of dentistry lies in the young man. Therefore, it behooves the more mature practitioner to put forth every effort to encourage the young blood.

In my mind there is no better way of doing this than to rope him into the local society and then give him a part in our clinics, papers, etc., providing of course he shows the proper spirit of progressiveness.

I am great for the local society. There are numerous tasks and problems affecting the interest of the various branches of the profession which relate almost wholly to local conditions. There are local problems which should be taken up locally. Every small town should have a dental society, for a better understanding of problems and conditions as they arise locally, to say nothing of the educational feature, and social fellowship offered by the smaller group.

In fact develop the local man and organization and the State and American Societies will take care of themselves. Who knows but through lack of just a little local encouragement on the part of the older man has kept many a young and timid graduate from becoming a leader? Remember we were all new comers once.

One of the greatest obstacles in the advancement of knowledge among dentists of today (as well as of the past) is the fact that most of us stop studying when our diploma is handed us. Afterwards too much of our learning is acquired from the source of trade journals which are not always scientific and ethical.

I know of no better method for the average practitioner of today to pursue advanced study without loss of time from his office and with practically no expense than to take advantage of the service offered through the Library Bureau of the American Dental Association. For a deposit of \$2.00 you can have access to all of the recent dental and allied books in their library. The bureau also maintains a package library or clippings on special subjects from current dental publications. These are bound into a convenient binder. This service only cost 50 cents. The deposit is only made once and will entitle you to unlimited borrowing privileges. The deposit will be returned should you desire not to borrow any further. The bureau pays the postage from Chicago; and books can be borrowed for a period of two weeks but the time will be extended upon request.

A printed list of books and package libraries will be sent upon request to Miss Josephine Hunt, Librarian; American Dental Association, 212 S. Superior Avenue, Chicago, Illinois. There

are many reasons why a fellow should take advantage of this service. I'll mention just a few. The old graduate who wishes to "brush up," the man who wishes advice upon a special subject and last but not least, I give a definite example. I know a dentist who is now being sued for so-called malpractice or a case of osteomyelitis which developed after extraction. The dentist has found just the information he needs relative to this disease in a package library. There are many other uses.

There is one prediction I can make however, it is this: If the future of dentistry advances to the highest ideals and to the betterment of the dentist and the public it will be through hard work and keen foresight among our own members. Not from the medical profession, not from the State, not from politics, not from the other fellow but from us. Shall we be equal to the new and exacting requirements brought on our shoulders today?

May I insist that you plan now to be present at our coming district meeting which will be held in Raleigh, November the second and third. Mark the date now. Members of other districts are especially invited to be with us. Now all together to Raleigh we go.

The North Carolina Fourth District Dental Society has enjoyed a most satisfactory year, 1930 and '31. In the face of a general depression, we have eighty-eight paid members, a gain over the previous year of seventeen. It is up to the members of the Fourth District to make this a 100 per cent District in North Carolina. Your President, Dr. Mustian, and the Program Committee are arranging one of the most interesting and enjoyable meetings this District has ever presented.

Gentlemen, this organization is for the good of every member in this District. If we expect to grow this year as we should, get out and see your neighbor; talk membership in the District Society; bring him with you to the meeting November 2nd and 3rd. Also remember a most important obligation everyone must assume in any organization—a prompt payment of dues.

Many members of the Fourth District will be interested to know that the Raleigh Dental Laboratory will soon move to the Professional Building, where they have equipped one of the most modern and up-to-date laboratories in the South. I am sure we will all congratulate them on this progressive move to serve the profession best, and wish for them continued success.

SAM L. BOBBITT, D.D.S.,
Secretary-Treasurer.

PROGRAM

Fourth District Dental Society

Monday Evening, November 2, 1931, Tuesday, November 3, 1931
Carolina Hotel, Raleigh, N. C.

MONDAY EVENING, NOVEMBER 2

7:00 p.m. Banquet and Entertainment—Wilbert Jackson,
Director of Districts, Toastmaster, Clinton, N. C.
8:00 p.m. “Some Case Reports on Third Molars”—Dr. E. N.
Lawrence, Raleigh, N. C.
Discussion—Dr. M. R. Gibson, Dr. Louis N. West,
Dr. Z. M. Caviness, Raleigh, N. C.

TUESDAY, NOVEMBER 3

9:30 a.m. Invocation.
President's Address.
Roll Call.
Election of Officers.
10:30 a.m. “Correct Procedure in Making Contact with the
Patient and Full Mouth Survey Routine”—Dr.
E. M. O'Brien, Baltimore, Md.
Discussion—Dr. R. M. Olive, Fayetteville, N. C.
12:00 m. “A Discussion on the Relationship of the Dental and
Medical Profession”—Dr. H. R. Chamblee, Raleigh, N. C.
Discussions.
12:30 p.m. “Dental Health Education in N. C.”—Dr. J. N.
Johnson, Goldsboro, N. C.
Discussion—Dr. E. A. Branch, State Board of
Health, Raleigh, N. C.
1:00 p.m. Clinics:
1. “Hecolite Dentures—Advantages and Disadvantages”—Dr. J. W. Whitehead, Smithfield, N. C.
2. “Attachments for Lower Anterior Bridgework”—
Dr. H. N. Walters, Warrenton, N. C.
3. “Some Practical Cases in Bridgework”—Dr. R. M.
Squires, Wake Forest, N. C.

FIFTH DISTRICT DENTAL SOCIETY

The Program Committee of the Fifth District Dental Society has worked diligently for the past several months to give us a worth-while program on November 9th.

We sincerely extend to all officers and members of the other Districts and the State Society a cordial invitation to enjoy the day with us, and at the same time derive much benefit from our program which is given below.

PROGRAM

Fifth District Dental Society of North Carolina
Wilson County Court House, Wilson, N. C.
November 9, 1931

9:30 a.m. Meeting Called to Order by the President—Dr. Dewey Boseman.
Invocation—Rev. W. O. Blount, Pastor First Baptist Church, Wilson, N. C.
Address of Welcome—Hon. Chas. B. McLean, Mayor, Wilson, N. C.
Response—To be Selected.
Roll Call.
Reading of Minutes—Dr. J. E. L. Thomas, Secretary-Treasurer, Tarboro, N. C.
President's Address—Dr. Dewey Boseman, Wilson, N. C.
Reading of Communications.
Unfinished Business.
New Business.
Report of Committees.
Election of Officers.

11:00 a.m. "The Opportunity of the Dental Profession to Further Dental Health Education"—Dr. J. N. Johnson, Goldsboro, N. C.
Discussion—Led by Dr. E. A. Branch, Director of Oral Hygiene, Raleigh, N. C.

12:00 m. Clinics:

1. "Vulco-Brace Dentures" — Dr. J. V. Turner,
Wilson.
2. "Duplicating Dentures" — Dr. V. M. Barnes,
Wilson.
3. Clinician and Subject to be Selected.

1:00 p.m. Lunch—Cherry Hotel Dining Room.

2:30 p.m. Clinic:

Dr. G. W. Holliday, Professor of Prosthetic Dentistry, Medical College of Virginia, Richmond, Va.
Subject: "A Simple and Safer Way of Taking Impressions and Bite for Full Dentures."

[REDACTED]

DR. V. H. ROUSE

Wallace, N. C.

SEPTEMBER, 1931

[REDACTED]

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North Carolina is recognized; whose fine influence for
developing the best in life is felt and appreciated.*

THE BULLETIN

....of....

THE NORTH CAROLINA DENTAL SOCIETY

VOL. XV

JANUARY, 1932

No. 3

Entered as Second-class mail matter as a quarterly September 26, 1931, at the Postoffice, Raleigh, N. C., under Act of August 24, 1912

Subscription per year.....\$1.00

OFFICERS

DR. DENNIS KEEL, President	Greensboro, N. C.
DR. WILBERT T. JACKSON, President-Elect	Clinton, N. C.
DR. L. M. EDWARDS, Vice-President	Durham, N. C.
DR. N. P. MADDUX, Secretary-Treasurer	Asheville, N. C.

EXECUTIVE COMMITTEE

DR. Z. L. EDWARDS, Chairman, 1934	Washington, N. C.
DR. W. F. CLAYTON, 1933	High Point, N. C.
DR. S. B. BIVENS, 1932	Charlotte, N. C.

EDITOR-PUBLISHER

DR. FRED HALE	Raleigh, N. C.
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THE PRESIDENT'S MESSAGE

In the past few weeks North Carolina has suffered the loss of several of its largest banking institutions. But it has not broken the spirit of the people of the Good Old North State. We are taking our losses, whether they be direct or indirect; like the men we are. We had the moral courage to overcome the reconstruction period of both the Revolutionary and the Civil wars and we can, and will overcome the depression which we now face. Every dentist in the State should put his shoulders to the wheel and keep pushing, and if we do we will soon be able to shake off depression, and again prosperity will rule.

I want to take this opportunity to ask every member of the North Carolina Dental Society to do what the Raleigh Society did. To sit down and write a check for one dollar and send it to the A. D. A. Relief Fund. Wasn't that a fine example or precedent for a group to set, and why can't we all do likewise? Who knows when it will be our time to call on the Relief Fund for help and if you haven't done your part, would you feel that you had a right to make such a request? Send it in today, it isn't too late.

Now a word about dues. Do you know that if you pay your dues for twenty-five consecutive years you will be a life member

and will be exempt from such dues as the North Carolina Dental Society and districts may assess for membership. Another thing the Society cannot carry on without money. Organized dentistry is the reason for the dental profession being where it is today. Why do you know that without our State law governing the practice of dentistry that any person desiring to practice our profession could just hang out his or her shingle and go to work killing and murdering people, and call it dentistry? Now for the above reason if for no other, please send in your dues to your respective district secretaries.

We have a real program prepared and it is my earnest hope that every member of the Society will avail themselves of the opportunity to see and hear the entire program. So let's keep our chins up and beat old man depression and go to Elizabeth City 100 per cent strong!

ARE WE GIVING OUR DEGREE A SQUARE DEAL?

For the past year or eighteen months during which time there has been a terrible depression all over our nation, have you and I stopped to think how very happy we should feel that we are endowed with a degree of Doctor of Dental Surgery?

What other profession or business do you know that has been as profitable during the past two years as dentistry has, especially to the men who have met the situation squarely? If we will only take an inventory of ourselves and then look around and observe just how many other businesses or individuals which have gone against the wall, then we will and should feel more like treating our profession with a **SQUARE DEAL**. In the days of this depression, as professional men, are we sitting in our offices preaching hard times to every person with whom we come in contact, or are we optimistic and up and doing the things that will improve us in the service of dentistry?

No dentist has time to discuss politics or national problems in his offices regardless of whether the listener be a patient or visitor. The dentist's spare time should not be spent in his reception room, but should be spent in his laboratory trying to improve his inlay technique, or some other phase of his work. Then when the day comes that this old nation returns to normal, we should and will

be in position to render a better and higher grade of dental service to all mankind.

To keep abreast and obtain a high knowledge of dentistry one must read his journals, attend and take interest in all of the Dental Society meetings possible, and along this line, allow me to call your attention to the wonderful program being formulated by our Program Committee to be staged at Elizabeth City, North Carolina, May 2-3-4, 1932.

Elizabeth City has in store for us a grand and glorious time, so start right now to wearing that North Carolina Dental Association smile—the kind that won't wear off and meet me at Elizabeth City in May.

Fraternally,
N. P. MADDUX, *Secretary-Treasurer.*

OUR DISTRICT MEETINGS A SUCCESS

It was my privilege and pleasure to attend four District Meetings of the North Carolina Dental Society in the year 1931. Circumstances over which I had no control prevented my attendance at the meeting of the First District at Lenoir. The report from this meeting shows that the fellows in the First District held a most successful meeting.

All the districts held a two-day meeting except the Fifth District. The two-day meetings were opened with a banquet in the evening and a love feast. The fellows gathered around the banquet tables for a real evening of fellowship, such as can only be had at the District Meetings of the North Carolina Dental Society. You fellows who have been staying away from your District Meetings on the first evening don't realize how much you have been missing. Besides a real honest-to-goodness banquet, each meeting had a program of clean wholesome entertainment, other than dentistry.

The Program Committees of the various Districts put on wonderful programs this year. The Clinicians and Essayists on the programs at our District Meetings would have been a credit to any State Meeting program.

The officers of the Districts accepted their duties seriously and did a wonderful piece of work in their Districts this year for

dentistry. I would pass on to you as individuals the plea of several of the presidents of the Districts in their annual addresses, to maintain the high standard our profession has attained. It will be so easy to lower the standard of our profession in these days when all may not be as well for all of us as we think it might be. Instead of lowering the standard that it has taken years of work and sacrifice to build, let us give a more efficient service, thereby, setting a higher standard for those who come after us to maintain. This can only be done by a closer cooperation of each member, one with the other.

Each District seems to have made new records this year in attendance and paid up memberships. This cannot be attributed to the efforts of any individual, but rather to the membership as a whole, who, seeing the great need of a great organization, gave of their money and their time to make a greater organization.

WILBERT JACKSON, D.D.S.,
President-Elect N. C. Dental Society,
Director of Districts.

NOTES FROM CHAIRMAN OF THE PROGRAM COMMITTEE

I am getting a real kick out of helping President Dennis and Secretary Nat compile the program for our State Meeting to be held in Elizabeth City in May, 2nd, 3rd, and 4th, 1932.

The men have been exceedingly nice and have replied promptly to the letters written them concerning the table clinics for the program. Every one seems very much interested in planning to attend the meeting this spring in Elizabeth City.

We are planning a real knockout and worth while program. We are going to give you the best all-round program of a practical every day use you have ever attended. This is a big order, but you make it a point to be there, and we will serve you the order nice and hot. We plan to give thirty table clinics and out of this number every man will be able to learn something that will compensate him for his trip to Elizabeth City.

The major clinics will deal with the latest in children's dentistry and diet, reconstruction of mutilated mouths, oral pathology and diagnosis in relation to systemic diseases. Periodontia, a disease which confronts four out of every five.

These four major subjects should give you a mouth full to carry home and chew over for quite a while.

We are not going to say anything about extraction this year, for every one in North Carolina has learned about that.

We would like for anyone in the State who has a good table clinic, and will give it, to get in touch with Dennis Keel, Nat Maddox, or me, and we will gladly arrange for your exhibition.

Again let me urge you to shape your plans to attend the meeting in Elizabeth City, learn and enjoy the program, feel the hospitality in that community, and see the points of interest in and around that section.

Will be seeing you in May.

T. EDGAR SIKES.

DENTAL RELIEF FUND

ARE YOU A SLACKER?

There are a number of members of the American Dental Association who have not sent their checks for the Relief Fund.

You are probably not a slacker but you may have neglected it.

The check will be just as welcome now and you had better fine yourself for your neglect. Make the check a little larger than you intended.

You may be assured that your money is needed. It will help relieve the misery of some dentist who needs help and needs it badly.

If you did send a check, are you sure it was large enough? Better send another one now for all you think you can afford.

Make the check payable to the Dental Relief Fund and mail it to Dr. H. B. Pinney, Secretary American Dental Association, 212 East Superior Street, Chicago, Illinois, or to any member of the Committee. Your State will get the credit.

The Dental Relief Fund Committee: R. Ottolengui, Chairman; Fred R. Adams, Secretary; Edward G. Link, William T. Chambers, Olin Kirkland.

The 1931 Seals were sent to you in December. Their purpose is well known to all of the members of the American Dental Association.

Were you ever hungry, with no money in your pocket, with no hope of getting any, hungry and sick and tired—Oh so tired and weary?

There are dentists just like that. They have tried hard but fate seems to have stacked the cards against them. They have struggled along until now.

These lean times have meant some discomfort, some annoyance and some worry to most of us. To them they have meant the end of all hope. Either we must help or they go to the poor house.

Do not limit your check this year to one dollar. Make it for five or ten dollars, make it large enough to be of real help if you can; but send the one dollar anyway.

The demands upon the Fund have been heavy for the past year and they will be heavy for some time to come. There is nowhere you can place that money that it will do more good.

Remember every cent goes to the Fund, there is no overhead, no salaries, it all helps feed and clothe those who are down and out.—The Dental Relief Committee.

PUT AWAY A COIN A DAY FOR THE RELIEF FUND

Little Mickey Fosset, the five-year-old son of a Memphis dentist, took one hundred pennies from his bank and contributed them to the Relief Fund.

He is going to put away a cent every day until the Buffalo Meeting and contribute them also.

What an example this five-year-old is setting us. Put away a coin, not necessarily a cent, every day for the next year for the Fund. What a glorious addition we can make to the Fund if we all do this.

Make it retroactive too, send in a coin for every day of the past year so that this year we may exceed all previous ones.

There are dentists who are in need. This money will help keep someone from the poor house.—The Dental Relief Fund Committee.

J. C. WATKINS, D.D.S., F.A.C.D.,
North Carolina Member.

A continuous membership in the North Carolina Dental Society for twenty-five years entitles one to life membership, and it's a valuable asset, as well as an honor. I hope all the members will

take heed and pay their dues promptly. The Society cannot operate without dues, and without organized dentistry we cannot keep abreast of the times nor can dentistry continue to exist.

North Carolina last year ranked very low in the column of dollars paid up for the A. D. A. Relief Fund, and at this time I want to take the opportunity to tell the entire membership that the Raleigh Dental Society to the man sent in a dollar for the relief fund. It is not too late now and I am appealing to each local society and every member to sit down right now and send in a dollar for this fund. We cannot tell when one of us may have to call on this fund for relief. So please do your *bit*.

The banking situation in our State has been shaken up a bit for the past few weeks, but the spirit the people all over the State are showing is wonderful, everybody seems to be smiling regardless of adversities. It is surprising how quickly we good old folks of North Carolina can adjust ourselves. But why not? Everything will come out O. K. We have everything on earth in North Carolina we need to live on. We are not dependent on any other country for our resources. So let's keep our chins up and save our nickels and dimes for the Elizabeth City Meeting!

THE DENTAL RELIEF FUND

The December issue of "The Journal of the American Dental Association" carries a per capita statement of the subscription of the different states to our National Relief Fund.

North Carolina ranks so near the bottom of that list that we cannot feel any pride in the fact that two states rank lower than we do. We are practically on a par with them. This should not be. The situation has come about by careless indifference on our part, and we should do everything we can to correct it.

At the December meeting of the Raleigh Dental Society the matter was brought up and we determined, as far as possible, to see that our local society contributes at least one dollar per member this year and each succeeding year. Each individual member then and there contributed his dollar which was turned over to our Secretary-Treasurer to be forwarded to the American Association, asking that we be listed among those contributing 100 per cent.

We are publishing this plan as a suggestion that might lead

similar organizations to more general and more liberal contributions both this year (1931) and the years to come. If the plan works well for Local Societies, it could be broadened and taken up at District Meetings. That course would certainly educate us to the point of knowing how the fund was managed. It does not go to the unworthy—a careful check is made on each application; every safeguard is thrown about its distribution.

If an application for participation in this fund goes first to the American Association, it is referred back with all possible data, to the State Society as to what action they recommend. Quoting from a recent letter from the Secretary of the Relief Commission of the American, he says: "That a person to be eligible for relief must have paid dues for at least five years and his entire professional record strictly ethical. They need not have paid dues during the last several years because of adversity and yet if their ethical record is clear, they are eligible to relief."

If the State Society recommends relief after careful investigation, the American will contribute an equal amount with the State Society. This seems a sound and common sense view to take of it and should convince us that it not only merits our support but almost demands it.

Dr. J. C. Watkins has recently sent out an urgent appeal asking us to contribute to this worthy cause and we wish to add to his appeal and to plead with you that North Carolina may at least become an average per capita contributor. Do not let the fact that you have neglected to send in your 1931 contribution keep you from sending it in now. It is a "year-round" obligation that we should feel great pride in.

J. MARTIN FLEMING.

INTERESTING FACTS ABOUT THE DENTAL DIVISION NORTH CAROLINA STATE BOARD OF HEALTH

There has never been a time when there was greater need for Public Health. It is the belief of those associated with the Dental Division of the State Board of Health, based on their experience, that only one-tenth of the people of our State visit the dentist regularly.

This year the Dental Division will endeavor to put on a Mouth Health Education program that will extend from Currituck to Cherokee.

A close check up on 502 children from eight to thirteen years of age attending the most centrally located school in High Point, that is, those to whom a dentist is most available from the stand-point of finances and distance, revealed the fact that only 30.4 per cent had visited a dentist, while 69.6 per cent had never been inside a dental office for treatment. The most appalling part, however, of this check up is the fact that 90.3 per cent of this number actually needed dental treatment other than oral prophylaxis.

A similar check up was made in two other schools which might be classified as industrial or suburban, and here are the findings: In a group of 930 children between the ages of six and thirteen, only 9 per cent had visited the dentist, and in most cases even this small per cent had seen the dentist to have an aching tooth extracted.

Dr. Melvin did Public Health work in the High Point Schools last year and will be there until the close of schools this year. Dr. Robert M. Bell, a colored dentist, is being sent to the High Point Colored Schools for twelve weeks. If the High Point program could be in all the schools of the State child health would be improved and grade repeaters reduced. It should be noted that High Point is financing this program with the cooperation of the State Board of Health.

Dr. Buie, Health Officer of Guilford County is very enthusiastic about the Dental Health program. He has requested the services of Dr. Holliday, another colored dentist of the State Board of Health, for two months or more in the colored schools of the county. This is in addition to Dr. Pringle, who is rendering oral health service in the white schools.

Dr. Paul Fitzgerald, Dental Member of the County Board of Health in Pitt County has been of great assistance in securing the appropriation for this work. Pitt County has had a Dental Health Program for the past three years and another appropriation is expected for the coming year.

An appropriation has been secured in Rutherford County and Dr. Underwood will conduct the Dental Health Program there.

In Forsyth County, Dr. McKaughan has put on a real Dental Health Program. In addition to dental corrections and educational work, he has referred 643 children to their dentists by mailing cards to their parents.

A program has been begun in Pasquotank County by Dr. Smith, where an appropriation has been obtained for the work.

Dr. Ernest A. Branch is doing marvelous work as Director of the Dental Division, North Carolina, State Board of Health. In his untiring efforts in building health among the school children of the State he justly deserves the support and cooperation of every dentist within our borders.

HOW DENTISTS AND NURSES CAN ASSIST IN SANITATION PROGRAM

By R. D. BEAM, *Assistant Engineer*

North Carolina State Board of Health, September, 1931

During this period of depression, every decreasing appropriation and decreased personnel, close cooperation of all State Institutions and Departments, and more especially Health Departments, is necessary if we are to keep up with modern progress in hygiene and sanitation and give the same efficient and helpful service over the counties, cities, and schools as they have received and have learned to expect. Following Doctor Parrott's idea that the different units of the Health Department combine to the extent of promoting jointly the fundamental principles of the related sciences which forms the foundation and basis of all public health work, I was asked by Mr. Booker to take over part of his responsibility to give some idea to the dentists and nurses, who will come in contact with practically all of the schools and school children in the next two years, how they can assist in cooperating with our department in promoting and advancing the fundamental principles of sanitation at the schools over the State. We realize of course that your major interest and deepest thought will not be to inspect and recommend improvements for defects in the sanitary facilities, but you can be a great factor in assisting by giving it some thought in order to be prepared to give the school superintendents the fundamental principles of approved sanitation methods. There is no doubt about the need for improved methods and efficient operation of the sanitary equipment in the schools which have a direct bearing on the health of the child. Owing to the rapid consolidation program that the State has carried on in the past few years, details of construction and types of equipment

were sometimes planned more with the idea of saving a dollar than with the ultimate result on public health. When the county is financially low, the architect often skimps the water and sewer systems, and heating and ventilating systems, in order to provide a larger and more ornate building. We know these conditions exist and only by cooperation and assistance from all departments concerned can they be corrected. You can help wonderfully in your work over the State. We could not expect detailed inspection work, that would interfere with your principal work at the school, but you could be of tremendous assistance and help, if you would make suggestions and recommendations for correction to the superintendent and principal where you see and come in contact with insanitary conditions at the school. Complicated cases could be reported to us for special investigation, but the biggest part of the work is the small things that are obvious but not corrected, on account of ignorance or indifference. Possibly the most important part of the work is only the faculty of seeing the faults and realizing that it is now part of your responsibility to call it to the attention of the school authorities responsible. It does not take a sanitary engineer to know and realize that an open dug well with a rope and chain is likely to become contaminated and be responsible for water-borne diseases. It does not take technical training to know that a pitcher pump, where children drink out of the spout or a common drinking cup, is a potential health hazard even if it has been used for sometime without any tangible ill effects. It does not take a sanitary engineer to know that a surface privy, open to flies, is likely to be responsible for carrying and spreading typhoid fever or hookworm disease. The principles of sanitation are the same every where, and with your knowledge of bacteriology, biology, and the prevention of communicable diseases, it is only the application of the principles and methods you follow in your own office, laboratory, home, and in your practice.

It is almost impossible to prevent or suppress a communicable disease without a knowledge of its mode of transmission and the laws of nature, like the laws of our State of North Carolina, do not excuse ignorance. Their penalties differ but by disregarding the laws of nature, the penalties are more certain. These penalties to a large extent could be avoided by applying the knowledge which the medical and related sciences have given us. This exact knowledge has taken the place of fads and fancies in the control of communicable diseases.

To apply this knowledge you have, and to know where improvements are needed, a sanitary survey of the schools should be made. A sanitary survey of a school embodies the following items: air, light, heat, water, food, sewage disposal, and disposal of garbage. Considering these we have the following requirements and principles to be observed: they are not complicated, they are simple and comparatively easy to know and apply.

For air or ventilation we recommend 500 cubic feet of air space and 2 square feet of ventilation, these requirements, as well as those for light are usually complied with by the architect in design of the building and do not require any inspection or recommendations on our part.

The common idea of the definition of ventilation is "Supplying with Fresh Air" or "The State of Being Ventilated as by Fanning or Winnowing." That idea is sufficient for some purposes, however, our idea of ventilation covers considerably more than that. Dr. Leonard Greenburg of the U. S. Public Health Service defines ventilation as it is understood in Health Departments. He says "ventilation is the production and

maintenance of an environmental atmosphere containing substances not inimical to health or comfort and of such temperature, humidity, and air motion as to make heat loss from the body take place at such a rate that comfort will be maintained at all times." According to Dr. Roseman, ventilation must serve a number of purposes and comply with a number of conditions before it can be considered satisfactory. "(1) It must bring pure air from without in order to dilute and remove the products of respiration as well as other sources of heat loss; (2) It must maintain the air within the room at a proper temperature and humidity, and, further must keep the air of the room in gentle and continuous motion; (3) It must remove the gases, odors, bacteria, dust, and other substances that contaminate the air of enclosed spaces; (4) It must dilute and remove the impurities produced by the burning of gas, candles, lamps and other sources." So we see that proper ventilation has a significance to health authorities and deals not so much with the quantity of air but the quality.

Just what bearing poor ventilation has on health is a problem that has not been fully decided. It is known that poor ventilation causes discomfort and discomfort often leads to poor health. We are sure in some instances in the past there has been too much emphasis laid on the public health significance particularly by those who held that carbon dioxide was a toxic gas, and later by those who held that there was organic toxin in the expired air. Both of these theories have been disproven.

For natural lighting facilities there should be transparent glass window space equal to one-fifth of floor space and artificial illumination should be ample to permit reading fine news print without eye strain. The light should be of proper intensity, equally diffused and come from the proper direction. Excessive window space is hardly possible for the excessive illumination on bright days may be regulated and softened with shades and awnings.

Heating is closely connected with ventilation and we have discussed that. The temperature commonly accepted as proper for a school room is between 66 and 72 degrees and is more satisfactorily secured with the direct-indirect system of steam or hot water pipes. Direct radiation from stoves or hot air furnaces are not very satisfactory for large schools.

The water supply should be ample and free from pollution or possibility of pollution. Most of the polluted water supplies at schools can be traced back to surface water entering the well or spring from which the supply is pumped. Location and elimination of this source of pollution is usually easy. Excluding any possibility of surface contamination is the main object and any way that is done is satisfactory.

Drinking fountains for pupils require some attention. Of course the common drinking cup is insanitary, but almost as bad is the neat, clean and well designed drinking fountain that does not have sufficient pressure and volume of water to prevent the students from drinking with their mouths over the orifice. Such drinking fountains of approved design give a false sense of security to the school authorities.

Food sanitation is a problem that we can control only where a cafeteria is run in connection with the school, and to these our laws and regulations governing sanitary management of cafes included in our Bulletin No. 259 should be complied with.

A satisfactory method of sewage disposal presents quite a problem at some schools—Quoting from Consolidated Statutes, chapter 95, article 9

" . . . failure on the part of the County Board of Education and County Superintendent to make provisions for sanitary privies, or a failure on the part of the County Commissioners to provide the funds shall be considered a misdemeanor and either the County Board, Superintendent or County Commissioners may be fined or imprisoned in the discretion of the court." It is part of our responsibility to enforce this law and recommend to the schools an approved system of treatment. In some rural district schools we approve the wooden pit privies, but these are hard to maintain and keep sanitary. Most of the consolidated schools have a water carriage system with treatment plants built according to our approved plans. Lack of maintenance often makes these a nuisance where only a small amount of well directed attention would make them function properly.

An approved method of collection and disposal of garbage around a school building and grounds is necessary if flies, rodents, and vermin are to be controlled. Possibly the best method of disposal is by incineration, and an efficient home-made incinerator can be built cheaply by perforating the bottom of a steel oil drum and putting several small round iron bars through to act as a grate. Simple, inexpensive incinerators can be built with the materials and equipment around every consolidated school building.

The foregoing items are mentioned to give some idea about what we do and expect to do in the schools with your assistance and cooperation. It is nothing short of a crime by the State against the State to have compulsory education and furnish the pupils with impure water or educate them in insanitary surroundings. The "little red school-house" of the past has grown into our modern and elaborate consolidated schools, many of which have an enrollment of 1,000 and with them has grown increased responsibilities of health departments which can only be solved by sincere and conscientious cooperation of all agencies and departments interested and concerned with the problems of hygiene and sanitation.

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DISTRICT SOCIETY OFFICERS

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FIRST DISTRICT DENTAL SOCIETY

OPPORTUNITIES AND OBLIGATIONS OF THE PROFESSION

The great profession of dentistry is comparable to our own young America 150 years ago. The possibilities for our country's development were visualized by our forebears, hence our America today with all comforts and conveniences desirable.

Our profession can and will advance only through men with vision and a determination to make the future generations "Dentally fit" as our forefathers made us safe from Indian attack and England's tyranny.

To relieve the present and make the future generations "dentally fit," we are face to face with a task immeasurably larger than our forefathers had in making this country safe for us. We seem satisfied to serve only about 20 per cent of our population, and permit the great

majority, to have their bodies literally wrecked by results accompanying dental neglect.

Why, you may ask, do the above conditions exist? I answer, it is primarily not Economics, but the fear of pain, and not knowing are not advised of the havoc done by neglect.

It seems our generation, young and old, have hereditarily acquired a dental fear as we have acquired a fear of all snakes, whether harmless or not. The older dentist can understand why, before the use of anesthesia in dentistry, this fear was justified.

Before you can make a sale, there must be or you must create a desire for the object offered. To serve these extra millions dentally, we must show them we are "harmless." Make all dentists know first and practice it, that it is possible to practically eliminate pain through proper use of anaesthetics.

It is an obligation of the dental and medical profession and the public that know, to get those that do not know, informed through any effective medium, of the insidious and damaging effects being wrought on the neglected American millions. This program should be world wide.

Is the dental profession prepared to meet the public's demand 100 per cent? I answer "no," not until we as dentists and the medical profession know more and are taught more in our colleges, the effects, of diet and oral hygiene on the body in general, teeth especially, from conception to death.

We must be enthusiastically dental-minded, believe in our profession, realize our obligation to the public, keep our minds, bodies, and office equipment in such a manner as to render the best service possible to the public, join and attend our societies and study clubs, read our Journals, make more dentists our closest friends, visit, hunt, fish, play golf with them always with the idea in mind, can we, as a profession, reach and serve the millions not enjoying the benefits derived from our services.

DR. A. D. ABERNETHY, *President First District.*

Granite Falls, N. C.

SECOND DISTRICT DENTAL SOCIETY

The Eleventh Annual Meeting of the Second District Dental Society, which was held at Hotel Concord, Concord, N. C., was a great success. The attendance was very good throughout the meeting. There were sixty-eight members and eighteen visitors registered. There were three new members taken into our District, making our membership a total of one hundred and twenty-seven members in good standing.

The Program Committee had arranged a most excellent program. The papers and clinics were very interesting and very practical. They all were enjoyed by those attending the meeting. There were lots of discussion on every paper, which as you know makes the program more interesting. In addition to the members of our Society who appeared on our program, we were very fortunate to secure Dr. J. T. O'Rourke, Dean of the School of Dentistry, University of Louisville, who gave a paper on "Radiographic Interpretation and Diagnosis." Dr. M. S. Aisenberg, Professor of Bacteriology and Pathology, Dental School, University of Maryland, who gave a lantern lecture on, "Mouth Lesions Involving Both Soft and Hard Tissues."

From all reports each District had good attendance and very good programs, which goes to show that most of our members of the North

Carolina Dental Society are interested in the Societies and are willing to help to promote the standards of our profession.

As you know our 1932 dues are due on January the first and I wish that every member would pay their dues as soon as possible and let's have a 100 per cent. I know that collections are very poor at the present time, but let's pay our dues as soon as possible and save that much in place of buying something that we do not need, for I am sure that the North Carolina Dental Society needs every member's support if we expect our next meeting to be a success. As you know, the expense of the Societies are depending on the dues which you pay into the Society. I want to urge and ask every member in the Second District Dental Society to pay their dues as soon as possible, and I am sure that the Secretary and Treasurer of the other District will ask the same of their members. I surely hope that every member in the Second District will pay their dues as soon as they did last year, for we had the best record of any District and we want our record to be just as good this year, if not better, so won't you please mail check as soon as you receive your statement?

In conclusion, I hope the year 1932 will be the most prosperous year the Dentists of North Carolina have ever known.

FRED HALL,

Secretary-Treasurer, Second District Dental Society.

THIRD DISTRICT DENTAL SOCIETY

The Third District Dental meeting held at Southern Pines, N. C., November 30th-December 1st, was one of the best ever held in the District. President Henry Carr presided in a very efficient and pleasing manner. The entertainment features were very much enjoyed. In addition to the banquet, a golf tournament was participated in by a good many, and a number of prizes awarded. Another feature of entertainment was the Archery exhibition at Southern Pines Country Club by Russ Hoogerhyde, national champion and Carly Thompson, President of National Archery Association.

The banquet on Monday evening was a very delightful affair with J. Fred Stimson of Southern Pines acting as toastmaster. Special guest of the evening was S. B. Chapin of Pinehurst, donor of the dental equipment of Moore County Hospital. In addition to Mr. Chapin there were a number of physicians present from local Medical Society, including Dr. L. B. McBrayer, Secretary of State Medical Society. Speakers for the occasion were Dr. J. T. Burrus, President of State Board of Health, Dr. J. N. Johnson of Goldsboro, both made stirring addresses, abstracts of which I have asked our Editor-in-Chief to publish. Following these addresses I gave a report on the 8th, International Dental Congress meeting in Paris, which was followed by a report of American meeting by Dr. Coble.

Tuesday a.m. the meeting was called to order by the President. Invocation by Dr. Stimson, First Baptist Church, Southern Pines. Address of Welcome by Bion H. Butler with response by Dr. Sikes. After reading of the minutes came the President's Address. Following this, greetings were extended by Drs. Keel, Jackson and Betts. A paper was then read by Dr. A. L. King, Atlanta, Ga., subject: "Some Fundamental Principles Necessary to Successful Crown and Bridge Work." Discussion by Dr. Alford and others. Next paper presented was by Dr. Dement of Atlanta, on "The Early Recognition and Treatment Periodontoclasia." Discussed by Dr. Gibbs.

In the afternoon table clinics were presented by the following: Dr. Harold Story on Exodontia, Dr. King on Crown and Bridge, Dr. Dement. Periodontoclasia, Dr. H. A. Edwards, Staining Porcelain, Dr. Henderson, Some Abnormalities and Dr. Daniels, Muscle Trimmed Impressions. The Moore County Society was awarded the Plugger Cup. The following District officers were elected: President-Elect, Neal Sheffield; Vice-President, G. E. Kirkman; Secretary and Treasurer, R. A. Wilkins; Editor, E. M. Medlin. Burlington was selected as meeting place for 1932.

Notes of address before the Third District Dental Society—By Dr. J. T. Burrus, High Point, N. C.

Congratulate the Dental Society on the high attainment; their activity in health work and their cooperation with the medical profession and also with the official workers in Public Health work in this State.

Delighted that the reorganization of the State Board of Health provided for a member of the dental profession on its board.

Selection of Dr. J. N. Johnson, his cooperation and wise council has been of great help and has reflected honor upon the North Carolina dental profession.

Dentistry is a specialty in medicine. Removing teeth, filling teeth cavities is far the lesser side. Your opportunity as dentists to detect conditions frequently severe to a weakened body or it can take a body from childhood into old age by detecting infection of gums; general oral infection; infection of tonsils, enlargement of lymph glands; detection of enlarged thyroid glands, all of which are easily within your scope of observation. The service you men render humanity as a health worker along these lines is incalculable.

The State Board of Health invites your cooperation, believing that if criticism comes from you it will be constructive and not destructive.

The Board of Health wants this profession to have due consideration for the work which it is doing and the way in which it is serving the State Board of Health.

The State Board of Health was indeed fortunate in securing the service of Dr. J. M. Parrott, who made a sacrifice to accept the work. In this short time he has put a bridle on every phase of the work in every department. He is a man with no superiors.

The State Board of Health wants to cooperate with the dental profession and the medical profession and with every profession that has to do with this great task of health work for our citizenship.

PERSONALS

Dr. and Mrs. A. W. Craver, of Greensboro, spent the holidays in Goldsboro. Dr. Craver reports that hunting was not so good.

Dr. Pringle, has been assigned to Guilford County where he will work in the schools for a period of eight months.

Dr. P. Y. Adams, formerly with the State Board of Health has accepted an appointment on the staff of the Burrus Clinic in High Point.

Dr. and Mrs. J. H. Wheeler, of Greensboro spent the Christmas holidays in Charleston, S. C.

Dr. G. E. Wyche, who has lived for the last two years at Guilford College has moved back to Greensboro.

DR. ROBERT S. COLE

Rockingham, N. C.

Alumnus of Virginia Military Institute, Graduate of Baltimore
Dental College, Member of North Carolina Dental
Society since 1898. Died December 16, 1931

FOURTH DISTRICT DENTAL SOCIETY

In thinking of professional organizations let us ever be mindful that they came into being for three particular reasons:

1. For the public.
2. For the profession.
3. For the individual members.

It would sometime seem that there is a tendency on the part of some of us to forget the first reason; in fact, forget the second reason and think only of the third. If there are those of you in the Fourth District who are getting lukewarm toward your Society, sit down and analyze in a spirit of tolerance what the North Carolina Dental Society means to the public; what it means to the Dental Profession and what it means to you as an individual.

Under the leadership of Dr. Ernest Branch who is given excellent support by the Board Members, especially our Dr. Johnson, public health work in North Carolina received a new and thriving interest. Our concern of the public welfare is largely measured by the thought and time we give to organizations incident thereto. Let's all pull a little harder now the load is a little heavier.

Dr. W. W. Rankin has opened an office in the Odd Fellows Building, Raleigh, N. C.

Dr. H. O. Lineberger was elected president of the Raleigh Dental Society at our January meeting. Dr. Ralph Clements re-elected Secretary Treasurer.

Dr. Paul Pearson has retired from the practice of Dentistry, but we hope, not for long.

The Raleigh Dental Laboratory is now located on the third floor of the Professional Building, Raleigh, N. C., and is equipped to do any and all kinds of laboratory work.

CASE REPORTS OF IMPACTED TEETH

BY DR. E. N. LAWRENCE, Raleigh, N. C.

Read before the Fourth District Dental Society, November 2, 1931

In presenting these case reports to you I shall attempt to give you evidence only and let you draw your own conclusions. I am presenting the findings of the attending physicians, both before and after removal of impactions. Also my findings of the condition of the oral cavity.

The radiograms do not reveal anything unusual: no more than you would find in any every day average busy office, but the symptoms and reaction to treatment were a little out of the every day occurrence, therefore this paper. I hope you will find them of interest. After you have heard the reports, you are privileged to decide on the merits of the same.

CASE REPORT No. 1. Female, age 18, single. Medical report by Dr. M. R. Gibson, Raleigh, N. C.: "Reported May 14, 1931, complaining of blurred vision of the left eye and stated she first noticed this deficiency May 10, 1931. It had gradually grown worse until she could hardly see any with the left eye. Snelling's Test Type examination revealed vision at this time, right eye 20/20; left eye 20/200. Right eye was normal in appearance; left eye hemorrhagic, spots in retina, cloudy media, sclera muddy yellowish rather than clear white as in case of the right eye.

Wasserman negative, blood pressure normal, tonsils removed previously, sinuses free from infection. Physical examination did not indicate gastro-intestinal, gall bladder, kidney, heart or vascular diseases.

July 1, 1931, left eye still impaired. Referred at this time for dental examination. X-Rays revealed four embedded third molars, otherwise condition of oral cavity in good condition. Soft tissues healthy. There were three small cavities. No pulpless teeth. Occlusion nearly normal.

Between July 1st and August 1st the four third molars were removed. We removed the four because we were working on a process of elimination in an endeavor to reach the cause of eye trouble. And, too, because they were unnecessary in her mouth for a better grinding surface.

Examination August 25th revealed right eye normal, left eye sufficiently improved to be able to observe the eye grounds. Right eye 20/20; left eye 20/40.

Examination September 2nd, vision of left eye improved to 20/20.

Examination October 10th: left eye now entirely normal, eye grounds free from hemorrhage and vision clear of all blur.

No treatment other than the removal of third molars given.

CASE REPORT No. 2: Female, age 26, unmarried. Medical report given by Dr. Verne Caviness. "Patient reported to me August 28, 1931. Complains of nervousness, acne and lack of energy. Also left leg frequently tingles, and at times gives away to her weight allowing her to fall. Reports she was in bed a major portion of last winter on account of respiratory tract infections.

Physical examination shows pulse 120 per minute. Blood pressure 110/70; weight 117; heart and lungs normal; reflexes markedly exaggerated; no varicose veins visible, though both legs showed blotched spots above the knees which appear irregular and for no obvious cause.

August 29th dental examination revealed soft tissue fairly healthy. Teeth somewhat irregular; some large fillings but no pulpless teeth. X-Ray revealed impacted third molar of the left mandible.

Blood calcium examination made to determine cause of long bleeding time. Fowlers solution given three times daily. Cold vaccine given and alcohol applied locally to lesions.

Diet: low carbohydrates and salt.

August 31st. Impacted third molar removed.

September 10th. Socket healed; no headaches; no acne; blotches of the legs still present. Pulse 120, weight 116.

October 10th, pulse dropped to 90. Patient reports no giving away of the left leg as before. Acne cleared up and no spots on the legs.

CASE REPORT No. 3: Female, age 43, unmarried. Physicians in charge, Drs. Hubert Haywood and Louis N. West. Clinical history by Dr. Haywood. May 7, 1931, chief complaint aphonia. Has not been able to speak above a whisper since January, 1930. Condition has not improved or gotten worse during stated time. Previous to January, 1930, had similar condition for two weeks, which rectified itself. Temperature 98; pulse 72; respiration 16; blood pressure 120/80; heart normal, lungs normal; bowels normal; genito-urinary tract normal; nervous, yes; neck glands slightly swollen; urine normal; blood count HB 80 per cent; Wasserman negative; basil metabolism, 15; gastric analysis, none made; vocal chords on inspection, other than being pale, looked normal; tonsils small; nose normal; sinuses clear; patient stout and well nourished, apparently very healthy. Medically speaking, one must rule out the question of tuberculosis and lies in an aphonia of long standing. A dose of neosalvarsan was given and a provocative Wasserman done, which was negative. Physical and laboratory examination revealed no evidence of tuberculosis.

Diagnosis: Hysterical aphonia and hypothyroidism.

Treatment: Rest, reassurance. Iodine tablets three times daily; thyroid extract 1 grain three times daily.

Patient seen again June 5, 1931. Aphonia persisted. Complained of weakness; heart action good; pulse rate 72; blood pressure 120/70. Advised continuance of thyroid extract. Basil metabolic rate was low, ruling out syphilis and tuberculosis. Two factors presented themselves in the continuance of aphonia for consideration. Namely, did the hypothyroid condition influence the nervous system to such an extent, in a deleterious manner that an hysterical aphonia was induced; or was the aphonia a primary condition due to a nervous system which was basically weak?

At this time patient was referred to dentist for oral examination.

June 5, 1931, oral examination made. Visual examination found edentulous mouth; patient wearing plates; soft tissues normal with exception of fistula over lower right third molar region. X-Ray revealed this molar embedded in the bony tissue and a marked rarefied area about the crown of same.

June 23 the aphonia persisted. At this time embedded molar removed and all pathological tissues removed as thoroughly as possible.

On the third day following extraction the patient regained her voice and until now has not suffered a relapse of the aphonia.

FIFTH DISTRICT DENTAL SOCIETY

Dr. G. W. Holliday of Richmond, Va., made a very instructive and interesting presentation of full denture technique, before the Fifth District Society in Wilson. Without undertaking to go into his technique in detail, we would like to briefly abstract some of the excellent points he elaborated upon:

"In diagnosis use X-Ray for imbedded roots, decalcified bone and bone density. Study the coordination of the masticatory muscles, the relation of the jaws and the mental attitude of the patient."

"Impression taking was once considered the most important step in full denture work, but now we consider the bite most important because it involves the registration of the relation between the jaws."

"A knowledge of engineering aids one to understand the principles involved in the relation of the teeth to the ridges: the amount of overbite of the anteriors; and the amount of the curve of Spee to accommodate the condyle path."

"The size of the teeth must conform in some degree to the size of the mouth, the size of the ridges and the strength of the muscles."

"Esthetic considerations involve—the color, shape, size and the arrangement—by a combination of all of which one must strive to reproduce the original facial profile."

We are very sorry that space does not permit a full reprint of his paper with photographs to illustrate his fine points of procedure in full denture construction.

Dr. J. W. Stanley of Wilmington has given up his dental practice to open up a Health Bath Institution—Mineral Fume Baths.

Dr. R. C. Ingram of New Bern has accepted a position as full-time dentist in the government training school at Laurel, Md.

ANNUAL MEETING
OF THE
North Carolina Dental Society
ELIZABETH CITY

May 2, 3, 4, 1932

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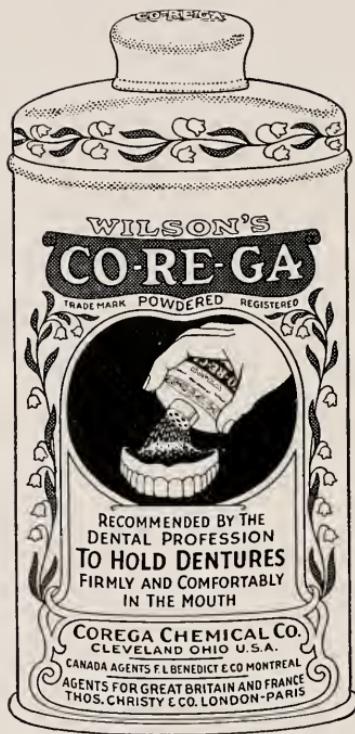
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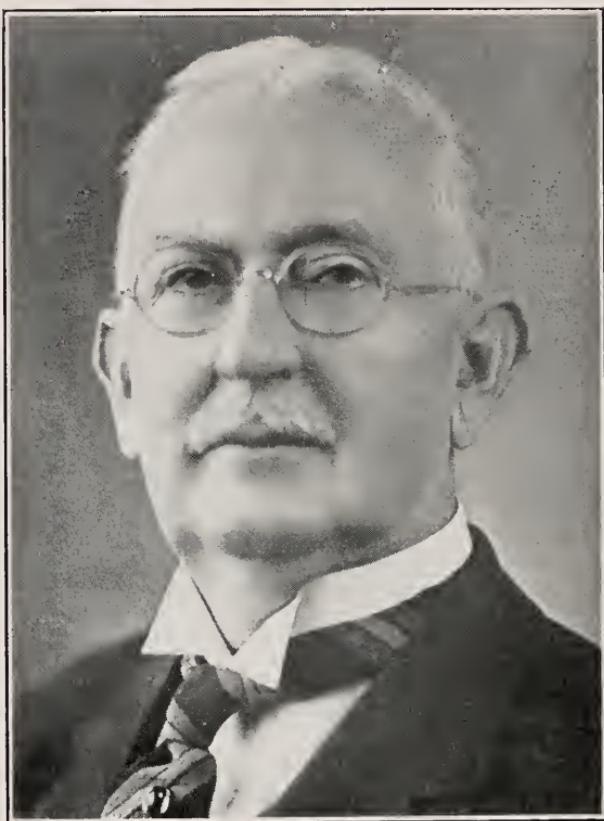
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PATRONIZE OUR ADVERTISERS



J. H. WHITE, D.D.S.,

Elizabeth City, N. C.

JOHN HERBERT WHITE

John Herbert White, D.D.S., was born on a farm in Halifax County, North Carolina, on February 15th, 1860. He was educated at Vine Hill Academy in Scotland Neck, N. C., and afterwards clerked in stores and taught in public and private schools.

At 20 years of age he entered the office of R. M. Johnson, D.D.S., as a dental student. In the fall of 1881 he entered the Baltimore College of Dental Surgery, and was graduated from that institution in the spring of 1883. Immediately settling in Elizabeth City, N. C., he has practiced there continuously ever since, having never deserted this original location for a single day's practice since leaving college. He is probably the only dentist in the State who has devoted so long a period of practice to one street of one town.

Dr. White joined the North Carolina State Dental Society the same day he passed the State Board of Dental Examiners and for many years has been a paid-up life member of the society. He was also a member of the Southern Dental Association when it consolidated with the National to form the American Dental Association. He has served as first vice-president and as a member of the executive committee of the N. C. State Dental Society. His attendance of dental society meetings ranges from Quebec, Canada, to New Orleans, La. In 1923 he formed a copartnership with H. E. Nixon, D.D.S., then of Edenton, N. C.

In 1892, Dr. White was married to Miss Ruth Buxton, a daughter of the late Captain Samuel N. Buxton, Confederate Cavalry, of Jackson, N. C. There have been three children by this marriage, and now seven grand children. The oldest daughter is the wife of Judge Walter L. Small, and the youngest is the wife of Lieutenant T. Carroll Parker, U. S. Navy. The son is owner of the Buxton White Seed Company of Elizabeth City.

Dr. White has served as president of the Elizabeth City Chamber of Commerce for several terms, on the Graded School Board for a number of years, as director of the Mercantile Bank and the Savings Bank and Trust Company, as vestryman and junior warden of the Episcopal Church for many years.

His chief diversion is horseback riding, which he has kept up all of his life, not being afraid of any horse that will keep on his feet.

He was a member of the N. C. State Guard for ten years, Captain of the local military company and a Lieutenant-Commander of the State Naval Brigade. During the World War, he was a member of the Medical Advisory Board, while his son seeing action in the A. E. F. in France as a Lieutenant of a machine gun unit.

Dr. White is still actively engaged in his practice of dentistry and can be found at his office regularly every day of the week.



DENNIS KEEL, D.D.S.,

*President of the North Carolina Dental Society.
Greensboro, N. C.*

FOREWORD

Once again it is time for the annual meeting of our Society, when we are privileged to meet together in the early part of May for three short days. We will renew friendships of long standing; we will discuss problems of dentistry which have arisen to perplex us during the year; we will have the opportunity to hear speakers of rare ability thoroughly capable in their respective fields present subjects of practical interest of the day. It is not always easy for your officers or the committees to obtain authorities or to arrange a well-balanced program which will please the entire membership. We appeal to those who are interested in their own personal welfare, and the progress and advancement of the profession to take advantage of the valuable post-graduate courses and to not miss one session. To those who feel that all meetings are a waste of time, we hope that they may also attend and be convinced.

I want to take this last opportunity to appeal to the membership to pay up their dues and meet me:

Way down on the Pasquotank,
Where the bull-frog
Jumps from bank to bank,
And then jumps back into a keg of corn,
And croaks a whiskey tenor from night 'til morn.

DENNIS KEEL, *President,*
North Carolina Dental Society.

The Virginia State Dental Association meets in Winchester, Va., on May 16th, 17th, and 18th. This is a joint meeting of the Virginia and West Virginia Dental Societies.

All members of the North Carolina Dental Society are invited to attend.

The Tennessee State Dental Association meets in Memphis, May 9, 10 and 11. Members of the North Carolina Dental Society are cordially invited to attend.

AT ELIZABETH CITY, MAY 2, 3, 4, 1932



J. N. JOHNSON, D.D.S., F.A.C.D.,

Dental Member of the North Carolina State Board of Health, Goldsboro, N. C., will appear on the program Monday evening, discussing "The Opportunity for the Dental Profession to Further Dental Health Education."

THE EVOLUTION OF MOUTH HEALTH EDUCATION IN NORTH CAROLINA

The history of the endeavors and activities leading up to the present status of my subject dates back a quarter of a century or more, to the Chairmen of the Oral Hygiene Committees of the North Carolina Dental Society. The leaders in that day were cognizant of the fact that there was, and is, a relation between the mouth and systemic disease, and that the deplorable mouth conditions witnessed every day are due, not so much to ignorance of an indifferent sort, but to ignorance on account of omission on the part of the dental profession, to teach the laity this relationship.

In several parts of the State efforts were made to get the teaching idea "tried out," but on account of unorganized effort, this endeavor would die out temporarily, soon to be revived again with new zeal and enthusiasm; and things went along until the Bureau of Medical Inspection of Schools was instituted by the State Board of Health. This continued in the experimental stage and it was not until the Legislature of 1919 was in session that an appropriation of funds was made to finance this work which was destined to be a fundamental part of our educational program, and the teaching of mouth health to be looked upon as of equal importance as the teaching of the famous "Three R's."

In the beginning of this activity under this department the work was directed by a physician, who was in full sympathy with the undertaking and the work grew in favor with the laity and the dental profession. In two or three years a dentist was made field supervisor, and the work continued for several years, with a number of school dentists working in the schools. After four or five years of pioneering successfully, the directing head was changed and another physician directed for a short period, and then another for a short time.

About five years ago it was placed under the immediate direction of a layman, but continuing the supervisor—who was a dentist. During this time a hundred children per week and a hundred fillings somehow seemed to be the goal for each school dentist. The work done being of a limited nature and confined to corrections easily accessible. This was contrary to the ideal of some of the dental profession who thought Mouth Health Education should be stressed and after some conferences a suggestion was made that the activity deserved recognition as the Division of Dentistry of

the State Board of Health, with all the rights and privileges pertaining thereto, with a director who must be a licensed dentist.

This was done with the recent reorganization of the State Board of Health.

The paramount purpose of the endeavor is the teaching of Mouth Health both didactic and by visual instruction, as well as by demonstration.

The goal will be quality instead of quantity, in order that Mouth Health may take its rightful place as an integral part of a public health program.

The teaching of Mouth Health in every public school of the State as a precautionary measure against disease is our aim.

With the State Board of Health machinery augmented by the recent enactment of a statute placing a dentist on the County Health Boards for the purpose of coördinating the respective counties with the State's Dental activities, we feel that we are in a position to improve our work.

How well we are succeeding on a limited appropriation is well known to you all. We bespeak of you your continued coöperation.

J. N. JOHNSON,

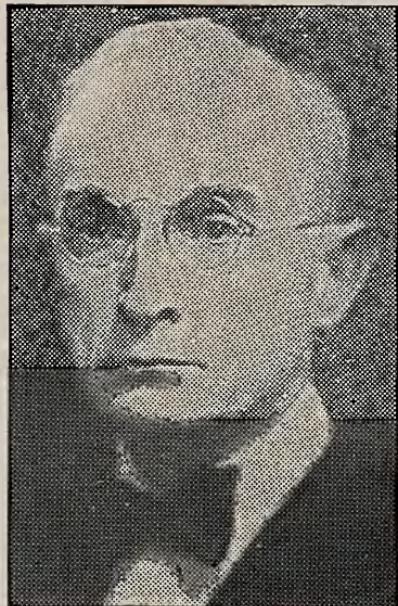
Dental Member of State Board of Health.

Visit—

Historical Edenton

“THE CRADLE OF THE COLONY”

ALLOW AT LEAST HALF A DAY FOR SEEING THE POINTS OF INTEREST THERE.



JAMES M. PARROTT, M.D.,

*Secretary of the North Carolina State Board of Health, Raleigh,
N. C., will appear on the program Monday evening, discussing
"In North Carolina Board of Health Activities."*



DR. FRED H. ROGERS, D.D.S.



WALLACE M. GIBBS, D.D.S.



FRANCIS ULEN, D.D.S.



J. T. BURRUS, M.D.

DR. FRED H. ROGERS, D.D.S., of the Forsythe Dental Infirmary for Children, Boston, Mass., will appear on the program Monday morning, discussing "Children's Dentistry." Progressive Clinic Tuesday afternoon and Wednesday morning.

WALLACE M. GIBBS, D.D.S., Charlotte, N. C., will appear on the program Monday afternoon, discussing "Differential Diagnosis in Mouth Lesions, Stressing Periodontal Lesions."

FRANCIS ULEN, D.D.S., Lieutenant Commander (D.C.), U.S.N., Dental Department U. S. Navy Medical School, Washington, D. C., will appear on the program Monday afternoon, discussing "Gold Castings, Used in Fixed Bridge Work and Single Restorations." Progressive Clinic Tuesday afternoon and Wednesday morning.

J. T. BURRUS, M.D., President of the North Carolina State Board of Health, High Point, N. C., will appear on the program Monday evening, discussing "North Carolina Dental Society's Relation to Public Health."

THE PRE-SCHOOL CLINIC

The Clinics being held in the different counties of the State to determine the fitness of the child to enter school during the coming term, mean much more than the average dentist thinks. The little tots are coming up for a physical examination, which will show the parent what defect, if any, each individual child has. The height and weight are carefully checked, they are examined for tonsils, adenoids, defective vision and hearing—heart and skin trouble—the fact is a thorough examination is made by a competent physician.

Such a comprehensive examination is not complete without a thorough dental examination also, and no one but a dentist is competent to make such an examination. Those of us who have been looking for fields where some civic service could be done will certainly find it here. Almost every home is represented by a little "six-year-old" entering school for the first time. Nine times out of ten the mother brings the child—she comes to learn just what is needed. The dentist has an opportunity to tell each mother of her own individual child's needs. If the child is undernourished, he can talk diet as it relates to teeth; he can preach milk, vegetables and fruit as a substitute for excessive sweets. There are many ways in which he can advise the mother of the child's dental needs. She comes with an open mind—she will listen to you. She is anxious to correct all physical defects. She has been educated up to it by the great work being done by Dr. Branch. You are merely making a personal application of what he has taught in a broader field.

The man to take the lead in this work should be the dental member of the County Board of Health. He cannot do it all by himself, but he can direct it. He can arrange to have a dentist present at each pre-school clinic, and, if we all coöperate, it will not require much time from any of us.

If this appeal comes too late to bear fruit this year, let us keep it in mind another year. It not only helps the child and the home from which he comes, but it helps the profession to see behind the scenes, so to speak, and to know something of the dental needs of his community.

J. MARTIN FLEMING, D.D.S., F.A.C.D.,
Member Wake County Board of Health.

THE BULLETIN

....of....

THE NORTH CAROLINA DENTAL SOCIETY

VOL. XV

APRIL, 1932

No. 4

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Subscription per year.....\$1.00

OFFICERS

DR. DENNIS KEEL, President	Greensboro, N. C.
DR. WILBERT T. JACKSON, President-Elect	Clinton, N. C.
DR. L. M. EDWARDS, Vice-President	Durham, N. C.
DR. N. P. MADDUX, Secretary-Treasurer	Asheville, N. C.

EXECUTIVE COMMITTEE

DR. Z. L. EDWARDS, Chairman, 1934.....	Washington, N. C.
DR. W. F. CLAYTON, 1933	High Point, N. C.
DR. S. B. BIVENS, 1932	Charlotte, N. C.

EDITOR-PUBLISHER

DR. FRED HALE	Raleigh, N. C.
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ENTERTAINMENTS

THE ANNUAL BANQUET

Virginia Dare Hotel Ball Room

TUESDAY, MAY 3RD, 6:30 P.M.

The Annual Banquet of the North Carolina Dental Society will be held in the Ball Room of the Virginia Dare Hotel on Tuesday, May 3rd, 6:30 p.m.

Tickets at the moderate price of \$1.50 per plate may be secured from the Committee, or at the Registration Desk, or by Mail.

Please make your arrangements as soon as possible, so the Committee can complete its arrangements.

THE BANQUET COMMITTEE.

AT ELIZABETH CITY, MAY 2, 3, 4, 1932

DANCE INFORMAL

Virginia Dare Hotel Ball Room

TUESDAY NIGHT, MAY 3RD

Virginia Dare Ballroom—10 p.m., to 1 a.m.

This dance will be held in the beautiful ball room of the Virginia Dare Hotel.

Tickets for this dance will be COMPLIMENTARY, and will be issued at the desk only. Be sure to get yours when you register.

ADMISSION BY TICKETS ONLY. GET YOUR TICKET WHEN YOU REGISTER.

FISH FRY

The Elizabeth City Dental Society wishes to extend to all the members of the North Carolina Dental Society and their guests a hearty invitation to attend the Fish Fry, to be given at the Elizabeth City Country Club on Monday afternoon, May 2nd, 5:30 p.m.

This will be a real treat for all who attend.

DON'T MISS IT.

GOLF TOURNAMENT

The Golf Tournament will be played on Tuesday afternoon at the Elizabeth City Country Club. The following firms have offered handsome prizes to be given at this time:

Rothstein Dental Laboratories.
Raleigh Dental Laboratory.
Co-operative Dental Laboratories.
Virginia Dental Laboratories.
Powers & Anderson Dental Company.
Thompson Dental Company.
Harris Dental Company.

All members that want to play in this tournament please report to Golf Committee as soon as you arrive.

M. M. HARRIS, *Chairman.*

A T T E N D T H E S T A T E M E E T I N G

TO THE LADIES

MONDAY NIGHT

The visiting ladies will be entertained by the wives of the local Dentists and the members of the Woman's Club, at the Club home on Monday night, May 2nd, from eight to ten p.m.

These ladies have arranged a program that will be entertaining to all who attend.

TUESDAY AFTERNOON

The local entertainment committee has arranged with the United States Coast Guard to have their boat, the Pamlico, here during the meeting, and on Tuesday afternoon, May 3rd, it will take all the visiting ladies down the Pasquotank River for the afternoon.

This will be a beautiful trip for the ladies, and hope every one will take advantage of it.

A TRIP TO ROANOKE ISLAND

On Wednesday, May 4th, the members of the Elizabeth City Dental Society will assist all members of the North Carolina Dental Society, and their friends in taking this beautiful trip to Roanoke Island, the garden spot of Dare County, and where you can see FORT RALEIGH where the first English settlement was made on the North American Continent. Also on this spot the first white child was born.

OTHER PLACES OF INTEREST ON THIS TRIP

Where the first Methodist sermon was preached in North Carolina.

The Wright Memorial Bridge across Currituck Sound. (Three miles long.)

Several Coast Guard Stations along the beautiful Atlantic Ocean where you are always welcomed.

Several ship wrecks, you can visit along the shore of the great Atlantic Ocean, where you can see the danger of this great coast, and the heroic work of the Coast Guard.

KILL DEVIL HILL, where the Government is now spending \$250,000 to erect a beautiful monument in honor of the famous WRIGHT BROTHERS, builders of the FIRST AIRPLANE.

AT ELIZABETH CITY, MAY 2, 3, 4, 1932

NAGS HEAD, a famous Summer Resort.

Manteo, the County Seat of Dare County.

Fort Raleigh Hotel, new and modern hotel.

Fort Raleigh, where SIR WALTER RALEIGH'S COLONY built their fort for protection of their colony from the INDIANS.

ON THIS SPOT, the first Christian baptism was held on this continent. Virginia Dare being the first white child to be born on this continent, and the great Indian Chief Manteo, were the first two to be baptized.

FULL DETAILS OF THIS TRIP WILL BE GIVEN OUT AT THE MEETING.

HOTELS

THE VIRGINIA DARE HOTEL

Single without bath, \$2.00; Single with bath, \$2.50-\$3.00; Double without bath, \$3.00; Double with bath, \$4.00-\$5.00.

THE NEW SOUTHERN HOTEL

Single without bath, \$1.50 and up; Double without bath \$2.50 and up; Single with bath, \$2.00 and up;
Double with bath, \$3.00 and up.

GENERAL INFORMATION

HEADQUARTERS—VIRGINIA DARE HOTEL

REGISTRATION BEGINS AT 8:00 A.M., MAY 2ND

FIRST SESSION BEGINS AT 10:00 A.M., MAY 2ND

GREETINGS:

The Local Arrangement Committee sends you greetings, and urgently requests your presence at our State meeting to be held at the Virginia Dare Hotel, in Elizabeth City, May 2, 3, 4.

The Entertainment Committee has been working hard to provide a real program of entertainment for you and your wives, and we want you to come early and see the meeting through.

A program of exceptional merit has been arranged by your Program Committee, and we extend to you a most cordial invitation to attend this meeting.

LOCAL ARRANGEMENTS COMMITTEE,
H. E. NIXON, *General Chairman.*

A T T E N D T H E S T A T E M E E T I N G

PROGRAM

MONDAY MORNING, MAY 2ND, 1932

VIRGINIA DARE HOTEL

Elizabeth City, N. C.

8:00 A. M.

Registration.

10:00 A. M.

Opening Session.

Invocation:

Rev. Geo. W. Perry.....Elizabeth City, N. C.
First Methodist Church

Address of Welcome:

Flora, J. B., Mayor.....Elizabeth City, N. C.

Response to Address of Welcome:

Jarrett, Ralph, D.D.S.....Charlotte, N. C.

President's Address:

Keel, Dennis, D.D.S.....Greensboro, N. C.

A Discussion on Relation Between the Dental and Medical Profession:

Chamblee, H. R., D.D.S.....Raleigh, N. C.

Children's Dentistry:

Rogers, Fred H., D.D.S.....Boston, Mass.

The Forsythe Dental Infirmary for Children.

The Fenway, Boston.

VISIT THE EXHIBITS

MONDAY AFTERNOON

2:00 P. M.

Differential Diagnosis in Mouth Lesions, Periodontal Lesions:

Gibbs, Wallace, D.D.S.....Charlotte, N. C.

3:00 P. M.

Gold Castings Used in Fixed Bridge Work, and Single Restorations:

Dental Department U. S. Navy Medical School,
Washington, D. C.

Ulen, Francis, D.D.S.....Washington, D. C.

4:30 P. M.

Meeting of House of Delegates.

5:30 P. M.

Fish Fry, Elizabeth City Country Club

AT ELIZABETH CITY, MAY 2, 3, 4, 1932

MONDAY EVENING

8:00 P. M.

North Carolina Dental Societies Relation to Public Health:

Burrus, J. T., M.D. High Point, N. C.
President State Board of Health

8:30 P. M.

In North Carolina Board of Health Activities:

Parrott, James M., M.D. Raleigh, N. C.
Secretary of the State Board of Health

9:00 P. M.

The Opportunity for the Dental Profession to Further Dental Health Education:

Johnson, J. N., D.D.S., F.A.C.D. Goldsboro, N. C.

9:30 P. M.

N. C. State Dental Board of Health:

Branch, Ernest, D.D.S. Raleigh, N. C.
Director Division of Dentistry

TUESDAY MORNING, MAY 3RD

8:00 A. M.

BREAKFAST

The Relation of Pyorrhea Organisms to the Diseases of the Mouth, Bronchi, and Lungs (Lantern Slides):

Smith, David T., M.D. Durham, N. C.
School of Medicine, Duke University

10:00 A. M.

GENERAL CLINICS

Cast Joints and Fixed-Movable Bridges and Cast Gold Shell Crowns:

Alford, Frank O., D.D.S. Charlotte, N. C.

Cast Over-Lay Technic and its Application in Practice of Orthodontia:

Barker, O. C., D.D.S. Asheville, N. C.

Bridge Work with Pontic:

Craver, A. W., D.D.S. Greensboro, N. C.

A Simple and Efficient Method of Obtaining Muscle Trimmed Impressions:

Daniels, L. M., D.D.S. Southern Pines, N. C.

Staining and Glazing Porcelain:

Edwards, H. A., D.D.S. Greensboro, N. C.

A T T E N D T H E S T A T E M E E T I N G

Peck's Inlay Method:

Grimes, I. K., D.D.S. Asheville, N. C.

Some Abnormalities:

Henderson, L. V., D.D.S. Pinehurst, N. C.

Impressions:

Jarrett, Ralph F., D.D.S. Charlotte, N. C.

Practical Orthodontia:

Keel, Harry, D.D.S. Winston-Salem, N. C.

Radiography:

Lasley, J. T., D.D.S. Greensboro, N. C.

"The Periodontal Pocket" (Lantern Slides):

Mizell, D. B., D.D.S. Charlotte, N. C.

Technic Used in General Extractions and Impactions, Together with Post-operative Treatment:

Maddux, N. P., D.D.S. Asheville, N. C.

Cohesive Gold Foil:

Moore, O. L., D.D.S. Lenoir, N. C.

Alexander Hood Crown:

Poindexter, C. C., D.D.S. Greensboro, N. C.

Amalgam:

Stanford, Alex R., D.D.S. Greensboro, N. C.

Cast Gold Work:

Kirkman, C. Grady, D.D.S. Greensboro, N. C.

Exodontia:

Story, Harold E., D.D.S. Charlotte, N. C.

Some Typical Orthodontia Cases and their Treatment:

Troxler, A. E., D.D.S. Greensboro, N. C.

Home Made Partial Dentures:

Pless, C. A., D.D.S. Asheville, N. C.

Attachment for Lower Anterior Bridge Work:

Walters, H. L., D.D.S. Warrenton, N. C.

Extra Oral Mandibular Block Injection:

Wells, Cary, D.D.S. Canton, N. C.

Unerupted Maxillary Canine and Canine Erupted in Malposition, as Demonstrated by X-Rays, Models and Appliances:

Thompson, Horace K., D.D.S. Wilmington, N. C.

Vulco Braces Denture:

Turner, J. V., D.D.S. Wilson, N. C.

Irrigation in Treatment of Vincent's Infection:

Wheeler, J. H., D.D.S., F.A.C.D. Greensboro, N. C.

REPRESENTING THE VIRGINIA DENTAL ASSOCIATION AT
N. C. DENTAL SOCIETY

The Occlusal Plane and its Relation to Full Upper and Lower Denture, Demonstrating the Occlusal-Plane Jig:

Simpson, Richard L., D.D.S..... Richmond, Va.

Orthodontia:

Cline, Carl Preston, D.D.S..... Norfolk, Va.

Periodontia:

Warden, C. S., D.D.S. Norfolk, Va.

2:00 P.M.

Progressive Clinics:

Group No. 1—Dr. Rogers N. C. General Clinics

Group No. 2—Dr. Ulen N. C. General Clinics

3:30 P.M.

Meeting of the House of Delegates.

6:30 P.M.

Banquet (Informal) Virginia Dare Hotel.

Toastmaster, Goerch, Carl Washington, N. C.
President's Emblem Presented by

Edwards, Z. L., D.D.S. Washington, N. C.

8:00 P.M.

Election of Officers.

Election of Two Members of the Board of Examiners.

Election of Delegate and Alternates to American Dental Association.

Report of Necrology Committee.

Selection of Place for Next Meeting.

10:00 P.M.

Dance—Virginia Dare Hotel, Elizabeth City, N. C.

WEDNESDAY MORNING, MAY 4TH

9:00 A.M.

Auto trip Nag's Head, Kill Devil Hill, Wright's Memorial,
Manteo—for Ladies and Others.

Progressive Clinics:

Group No. 1—Dr. Rogers N. C. Dental Clinics

Group No. 2—Dr. Ulen N. C. Dental Clinics

A T T E N D T H E S T A T E M E E T I N G

11:00 A. M.

Meeting of House of Delegates.

Report of Committees.

Report of Committee on President's Address, etc.

1:00 P. M.

General Session.

Installation of Officers.

Announcement of Committees.

Adjournment.

DELEGATES TO THE NORTH CAROLINA MEDICAL SOCIETY

Dr. Fred Anderson, Winston-Salem; Dr. Carl A. Barkley, Winston-Salem; Dr. J. P. Bingham, Lexington; Dr. S. B. Bivens, Charlotte; Dr. C. E. Blackburn, Winston-Salem; Dr. H. E. Blackburn, Walnut Cove; Dr. E. G. Clicke, Elkin; Dr. W. J. Conrad, Winston-Salem; Dr. W. L. Cripliver, Winston-Salem; Dr. Vernon H. Cox, Winston-Salem; Dr. R. C. Flowers, Winston-Salem; Dr. R. A. Frye, Pilot Mountain; Dr. W. D. Gibbs, Charlotte; Dr. A. P. Hartman, Winston-Salem; Dr. R. B. Harrell, Elkin; Dr. J. F. Hall, Winston-Salem; Dr. H. R. Hege, Mount Airy; Dr. D. W. Holcombe, Winston-Salem; Dr. P. E. Horton, Winston-Salem; Dr. R. H. Jones, Winston-Salem; Dr. O. L. Joyner, Kernersville; Dr. F. G. Johnson, Lexington; Dr. H. L. Keel, Winston-Salem; Dr. W. C. Logan, Winston-Salem; Dr. Guy M. Mastian, Winston-Salem; Dr. F. C. Mendenhall, Winston-Salem; Dr. T. Duke Morse, Winston-Salem; Dr. J. A. McClung, Winston-Salem; Dr. C. M. Parks, Winston-Salem; Dr. Grady L. Ross, Charlotte; Dr. J. R. Secretst, Winston-Salem; Dr. R. C. Spoon, Winston-Salem; Dr. Harold E. Story, Charlotte; Dr. L. A. Taylor, Winston-Salem; Dr. W. A. Taylor, North Wilkesboro; Dr. L. C. Thomas, Mount Airy; Dr. LeRoy Thompson, Winston-Salem; Dr. R. D. Tuttle, Winston-Salem; Dr. G. E. Waynick, Winston-Salem; Dr. J. C. Watkins, Winston-Salem; Dr. K. M. Yokely, Winston-Salem; Dr. J. S. Betts, Greensboro; Dr. W. F. Clayton, High Point; Dr. L. G. Coble, Greensboro; Dr. Dennis F. Keel, Greensboro; Dr. N. Sheffield, Greensboro; Dr. T. Edgar Sikes, Greensboro; Dr. H. A. Smathers, Greensboro; Dr. J. H. Wheeler, Greensboro; Dr. L. R. Zimmerman, High Point.

DELEGATES FROM THE NORTH CAROLINA MEDICAL SOCIETY

Dr. Howard J. Combs, Elizabeth City; Dr. Isaiah Fearing, Elizabeth City; Dr. W. W. Sawyer, Elizabeth City; Dr. C. B. Williams, Elizabeth City; Dr. James S. Rhodes, Williamston; Dr. J. H. Saunders, Williamston; Dr. Thos. A. Cox, Hertford; Dr. G. E. Newby, Hertford; Dr. T. P. Brinn, Hertford; Dr. L. P. Williams, Edenton.

ROLL OF HOUSE OF DELEGATES

OFFICERS OF THE SOCIETY

Dr. Dennis Keel, President.....	Greensboro, N. C.
Dr. Wilbert Jackson, President-Elect.....	Clinton, N. C.
Dr. L. M. Edwards, Vice-President.....	Durham, N. C.
Dr. N. P. Maddux, Secretary-Treasurer.....	Asheville, N. C.

EXECUTIVE COMMITTEE

Dr. Z. L. Edwards, Chairman.....	Washington, N. C.
Dr. W. F. Clayton.....	High Point, N. C.
Dr. S. B. Bivens.....	Charlotte, N. C.

ETHICS COMMITTEE

Dr. J. S. Betts, Chairman.....	Greensboro, N. C.
Dr. Dean H. Crawford.....	Marion, N. C.
Dr. J. W. Whitehead.....	Smithfield, N. C.

FIRST DISTRICT DELEGATES

Dr. A. D. Abernethy.....	Granite Falls, N. C.
Dr. Chas. S. McCall.....	Forest City, N. C.
Dr. I. R. Self.....	Lincolnton, N. C.
Dr. T. A. Wilkins.....	Gastonia, N. C.
Dr. C. C. Bennett.....	Asheville, N. C.

SECOND DISTRICT DELEGATES

Dr. Wm. Robey.....	Charlotte, N. C.
Dr. J. C. Watkins.....	Winston-Salem, N. C.
Dr. W. C. Taylor.....	Salisbury, N. C.
Dr. Ralph F. Jarrett.....	Charlotte, N. C.
Dr. Fred Hall.....	Winston-Salem, N. C.

THIRD DISTRICT DELEGATES

Dr. H. V. Murray.....	Burlington, N. C.
Dr. N. Sheffield.....	Greensboro, N. C.
Dr. G. E. Kirkman.....	Greensboro, N. C.
Dr. J. L. Spurgeon.....	Hillsboro, N. C.
Dr. R. A. Wilkins.....	Burlington, N. C.

FOURTH DISTRICT DELEGATES

Dr. P. M. Fleming.....	Raleigh, N. C.
Dr. E. B. Howle.....	Raleigh, N. C.
Dr. Everette Smith.....	Raleigh, N. C.
Dr. R. W. Stephens.....	Apex, N. C.
Dr. I. H. Hoyle.....	Henderson, N. C.

FIFTH DISTRICT DELEGATES

Dr. Paul Jones.....	Farmville, N. C.
Dr. Dewey Boseman.....	Wilson, N. C.
Dr. W. L. Hand.....	New Bern, N. C.
Dr. Paul Fitzgerald.....	Greenville, N. C.
Dr. Z. L. Edwards.....	Washington, N. C.

A T T E N D T H E S T A T E M E E T I N G

COMMITTEES OF THE NORTH CAROLINA
DENTAL SOCIETY

EXECUTIVE COMMITTEE

	<i>District</i>
Z. L. Edwards, <i>Chairman</i> , Term Expires, 1934.....	5
W. F. Clayton, Term Expires, 1933.....	3
S. B. Bivens, Term Expires, 1932.....	2

PROGRAM AND CLINIC COMMITTEE

N. P. Maddux, <i>Chairman</i>	1
T. E. Sikes, <i>Vice-Chairman</i>	3
W. F. Medearis.....	2
S. L. Bobbitt.....	4
Oscar Hooks.....	5
Cecil Pless.....	1

ETHICS COMMITTEE

J. S. Betts, <i>Chairman</i>	3
Dean Crawford.....	1
J. W. Whitehead.....	4

LEGISLATIVE COMMITTEE

E. B. Howle, Term Expires, 1935.....	4
Z. L. Edwards, Term Expires, 1934.....	5
J. Martin Fleming, Term Expires, 1933.....	4
J. N. Johnson, Term Expires, 1932.....	5
P. E. Jones, Term Expires, 1936.....	4

ORAL HYGIENE COMMITTEE

E. A. Branch, <i>Chairman</i>	4
R. Phillips Melvin.....	5
W. E. Clark.....	1
W. D. Gibbs.....	2
H. Kemp Foster.....	3

AUDITING COMMITTEE

Neal Sheffield, <i>Chairman</i>	3
R. E. Williams.....	5
Burke W. Fox.....	2

SUPERINTENDENT OF CLINIC COMMITTEE

L. R. Gorham, <i>Chairman</i>	5
A. P. Cline.....	1
W. L. Kibler.....	2
C. H. Teague.....	3
B. L. Aycock.....	4

CLINIC BOARD OF CENSUS

W. F. Bell, <i>Chairman</i>	1
E. S. Hamilton.....	2
J. B. Richardson.....	3
L. J. Pegram.....	4
B. McK. Johnson.....	5

AT ELIZABETH CITY, MAY 2, 3, 4, 1932

	<i>District</i>
RESOLUTIONS COMMITTEE	
C. E. Minges, <i>Chairman</i>	5
O. L. Presnell.....	3
K. A. Kareski.....	1
G. E. Waynick.....	2
L. M. Massey.....	4
NECROLOGY COMMITTEE	
J. G. Poole, <i>Chairman</i>	5
S. E. Moser.....	1
L. R. Thompson.....	2
R. W. Brannock.....	3
Victor Bell.....	4
STATE INSTITUTION COMMITTEE	
T. L. Young, <i>Chairman</i>	4
A. Pitt Beam.....	1
W. W. Abernathy.....	2
L. M. Foushee.....	3
G. L. Overman.....	5
MILITARY COMMITTEE	
G. A. Lazenby, <i>Chairman</i>	2
P. R. Falls.....	1
L. H. Zimmerman.....	3
C. H. Bryan.....	4
S. D. Poole.....	5
LIABILITY INSURANCE COMMITTEE	
C. C. Poindexter, <i>Chairman</i>	3
T. A. Wilkins.....	1
J. P. Bingham.....	2
H. R. Chamblee.....	4
L. J. Meredith.....	5
MEMBERSHIP COMMITTEE	
Wilbert Jackson.....	4
Chas. S. McCall.....	1
Fred Hall.....	2
R. A. Wilkins.....	3
S. L. Bobbitt.....	4
J. E. L. Thomas.....	5
EXHIBIT COMMITTEE	
N. P. Maddux, <i>Chairman</i>	1
J. L. Ashby.....	2
J. S. Moore.....	3
W. M. Ward.....	5
I. H. Hoyle.....	4
Paul Fitzgerald.....	5
DENTAL COLLEGE COMMITTEE	
J. H. Wheeler, <i>Chairman</i>	3
H. O. Lineberger.....	4
J. Martin Fleming.....	4

A T T E N D T H E S T A T E M E E T I N G

EXTENSION COURSE COMMITTEE

District

J. N. Johnson, <i>Chairman</i>	5
E. B. Howle.....	4
Dennis Keel.....	3
A. H. Fleming.....	4
E. A. Branch.....	4

COMMITTEE ON RELATIONS OF PHYSICIANS AND DENTISTS

H. L. Keith, <i>Chairman</i>	5
Henry C. Carr.....	3
S. Robt. Horton.....	4
Fred L. Hunt.....	1
P. C. Hull.....	2
John Pharr.....	2

LIBRARIAN

Jessie L. Zachary.....	4
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CAROLINA-VIRGINIA CLINIC COMMITTEE

L. G. Coble, <i>Chairman</i>	3
O. L. Moore.....	1
R. C. Flowers.....	2
E. L. Smith.....	4
M. B. Massey.....	5

ENTERTAINMENT COMMITTEE

L. H. Butler.....	5
J. H. White.....	5
S. W. Gregory.....	5
W. S. Griffin.....	5
J. F. Duke.....	5

PUBLICITY COMMITTEE

Harry Keel, <i>Chairman</i>	2
L. H. Mann.....	1
J. H. Lashley.....	3
D. L. Pridgen.....	4
J. R. Allison.....	5

GOLF COMMITTEE

A. T. Jennette.....	5
W. I. Hart.....	5
J. M. Kilpatrick.....	5

GENERAL ARRANGEMENT COMMITTEE

H. E. Nixon, <i>Chairman</i>	5
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AMENDMENTS TO CONSTITUTION AND BY-LAWS

By virtue of authority of and direction by the House of Delegates as recorded on page 165 Proceedings of the Fifty-Seventh Annual Meeting I have gathered from the Proceedings since April 16, 1928, changes and alterations of By-Laws and Constitution and print below:

Rescind Article VIII, Substitute the following:

"The State be divided into five Districts, their geographical boundaries corresponding to those designated in 1921, regardless of the number of dentists included, except with the consent of those directly involved, the president and Executive Committee may transfer sections of adjacent districts when in the interest of the North Carolina Dental Society."

(Authority Proceedings 1929, pages 262-263.)

Article IV, of the Constitution Amended as follows:

The officers of this Society shall serve for one year, or until their successors are installed. They shall consist of a President, President-Elect, Vice-President, Secretary-Treasurer, and shall be elected by ballot, as provided for in Article IX of the By-Laws, and an Editor-Publisher who shall be elected by the Executive Officers of this Society; namely, the President, President-Elect, Vice-President, Secretary-Treasurer and the Executive Committee.

(Authority Proceedings 1930, page 181.)

An Amendment to the Constitution and By-Laws:

Be it provided that any ten members of the House of Delegates may file a minority report dissenting from action of the House of Delegates and appeal to the General Session of the Society.

(Authority Proceedings 1931, page 165.)

Article VII, Standing Committees (Constitution), Amended as follows:

Section 1. The following standing committees shall be annually appointed by the President, immediately upon his induction into office: Ethics Committee, Legislative Committee, Program-Clinic Committee, Membership Committee, one member of the Executive Committee for three years and name the chairman, and such other committees as may be deemed necessary.

(Authority Proceedings 1931, page 164.)

Article I, Section 4 of the By-Laws, Amended as follows:

SECRETARY-TREASURER

The Secretary-Treasurer shall keep an accurate record of the Proceedings of this Society and of the meetings of the Executive Committee, notify all officers and committeemen in writing of their election or appointment. He shall take charge of all letters and communications addressed to the Society and conduct its correspondence, and shall give due notice of the time and place of all annual and special meetings of the Society and any Committee of which he is an ex-officio member, upon the request of the president or committee chairmen.

He shall collect all moneys due the Society from its component societies or other sources. He shall transmit to the general secretary

of the American Dental Association four dollars (\$4.00) for each active and life member as dues to the American Dental Association. He shall settle all debts of the Society on approval of the President. He shall be chairman of the Program-Clinic Committee and the Exhibit Committee.

He shall pay to the Secretary-Treasurer of each District Dental Society a sum equal to their expenditures for collecting the annual dues.

He shall receive an annual salary of \$350.00 and shall give bond in the amount of \$3,000 in a surety company licensed to do business in North Carolina, said bond to be made at the expense of the Society. Provided, that the amount of said bond may be changed at the discretion of the Executive Committee.

Section 4-A. The Editor-Publisher shall publish the annual Proceedings within four months following the annual meeting, at least two Bulletins and any other notices and publications the Executive Committee may deem necessary. His salary shall be \$350.00 per annum, provided the Executive Officers may withhold same in their discretion if the Proceedings fail to be published within the time limit prescribed by the Constitution and By-Laws."

(Authority Proceedings 1930, pages 181-182.)

Article I, By-Laws, Last Paragraph, Section 4, Amended as Follows:

He shall receive an annual salary of one hundred and fifty dollars (\$150.00), and shall give a bond in the amount of three thousand dollars (\$3,000.00) in a surety company licensed to do business in North Carolina, said bond to be at the expense of the Society. Provided that the amount of said bond may be changed at the discretion of the Executive Committee, and the chairman of the Executive Committee be designated as custodian of said bond.

(Authority Proceedings 1931, page 165.)

Article I, By-Laws, Section 4-A, Amended as follows:

The Editor-Publisher shall publish the annual Proceedings within four months following the annual meeting, at least two Bulletins and any other notices and publications the Executive Committee may deem necessary. He will be required to keep a record of whatever additions or alterations may be made in our By-Laws and see to it that they are published in our Proceedings. His salary shall be \$150.00 per annum, provided the Executive Officers may withhold same in their discretion if the Proceedings fail to be published within the time limit prescribed by the Constitution and By-Laws."

(Authority Proceedings 1931, page 165.)

Article I, By-Laws, Amend Section 4, by adding following paragraph:

That the outgoing Secretary-Treasurer make an additional final report to the Executive Committee within thirty days after the annual meeting, this to be published in the Proceedings. That the books, vouchers, checks, stubs, and all papers having to do with the finances of the society be delivered to the outgoing Executive Committee, who shall have them audited by a licensed C. P. A. at the expense of the Society and delivered to the incoming Executive Committee within two months of adjournment of the annual meeting.

(Authority 1931 Proceedings, page 165.)

DISTRICT OFFICERS

FIRST DISTRICT

President, Dr. A. D. Abernathy.....	Granite Falls, N. C.
President-Elect, Dr. Cary Wells.....	Canton, N. C.
Vice-President, Dr. John Reece.....	Lenoir, N. C.
Secretary-Treasurer, Dr. C. S. McCall.....	Forest City, N. C.
Editor, Dr. C. S. Moser.....	Gastonia, N. C.

SECOND DISTRICT

President, Dr. Ralph Jarrett.....	Charlotte, N. C.
President-Elect, Dr. John L. Ashby.....	Mt. Airy, N. C.
Vice-President, Dr. R. M. Patterson.....	Concord, N. C.
Secretary-Treasurer, Dr. Fred Hall.....	Winston-Salem, N. C.
Editor, Dr. Burke W. Fox.....	Charlotte, N. C.

THIRD DISTRICT

President, Dr. H. V. Murray.....	Burlington, N. C.
President Elect, Dr. Neal Sheffield.....	Greensboro, N. C.
Vice-President, Dr. G. E. Kirkman.....	Greensboro, N. C.
Secretary-Treasurer, Dr. R. A. Wilkins.....	Burlington, N. C.
Editor, Dr. E. M. Medlin.....	Aberdeen, N. C.

FOURTH DISTRICT

President, Dr. Fred Hale.....	Raleigh, N. C.
President-Elect, Dr. S. L. Bobbitt.....	Raleigh, N. C.
Vice-President, Dr. A. H. Fleming.....	Louisburg, N. C.
Secretary-Treasurer, Dr. I. H. Hoyle.....	Henderson, N. C.
Editor, Dr. R. M. Squires.....	Wake Forest, N. C.

FIFTH DISTRICT

President, Dr. Z. L. Edwards.....	Washington, N. C.
President-Elect, Dr. J. E. L. Thomas.....	Tarboro, N. C.
Vice-President, Dr. M. T. McMillan.....	Goldsboro, N. C.
Secretary-Treasurer, Dr. Paul Fitzgerald.....	Greenville, N. C.
Editor, Dr. H. K. Thompson.....	Wilmington, N. C.

DISTRICTS

FIRST DISTRICT

Members and men of the First District, "Hat's off" to our Program Committee. They have, as you see, a real treat for us. They have worked hard, so let us not disappoint them, ourselves, and the community we serve by not visualizing the latest approved methods of the best minds of the profession.

The status of dentistry of tomorrow rests with us today. We have some very vital issues to consider at this meeting. We earnestly desire each of you, with your Society and professional welfare at heart to serve as judge in these matters.

The social good feelings, wonderful attendance and interest manifested at our last meeting in my District assures you, Mr. President, my men from "the Catawba to the Great Smokies" will be at Elizabeth City, May 2, 3, 4.

DR. A. D. ABERNETHY,
President First District.

SECOND DISTRICT

DENTISTRY AND YOU

Some few years before dentistry became organized it was looked upon as a trade or craftsmanship and was refused time and time again any recognition even as a worthy trade and no other profession even considered it a necessity much less on par with their profession.

Less than a hundred years ago the first Dental College came into existence and from that day began organized dentistry. The men that founded that school came together for the purpose of lifting their trade from its lowliness to where it has risen today. Less than a hundred years ago they gave their time, money, and energetic thought for the thing they so earnestly wished for. Why did they do this? For the same reason Christ died on the cross. To benefit the ones that were to follow. They knew that dentistry was a necessity, an institute of health, and that some day it would be an organized, educated, scientific profession recognized so by the world as such.

Dentistry has advanced only through the channels of organized efforts and if the men of the past had failed to respond to the call and had refused to support physically, mentally and financially the cause during all these past years, where would we be today?

Dentistry has progressed due to the ceaseless efforts, of some of the men, faster than any other profession and now stands on par with any profession. It is a privilege to be a member of the dental profession and no dentist can afford but help support the organization at least financially.

The officers tell us that our treasury is empty and that if all the members would send their check for the amount they owe we would have a surplus.

President Roosevelt said no man can afford to receive and enjoy the privileges of a profession without placing something back in return.

Organized dentistry gives to you the laws for protection, the dental colleges for your scientific advancement, and honors you with a degree that enables you to make a good living and be received in any community as a leading citizen.

All that our Society wants in return is the small sum of \$12.00 per year, and your presence at the meetings. Pay your dues now and then go to Elizabeth City in May and help your Society meeting be one of the best in the world.

RALPH JARRETT,
President Second District.

THIRD DISTRICT

WHAT DO WE WISH FOR MOST?

During our journey here on earth we are all grasping for something and in our early adult life that something, in the main, is success. Shall I say success as individuals and stop? The answer is NO. All clean-thinking, progressive-minded men are interested in the other fellow. The success of one depends so much on the other in every phase of our activity. Now if this is what it takes, in part, to lay our foundation for success socially, financially, etc., then what should be our watchword and our resolution, as dentists who are members of organized dentistry?

It seems to me that loyalty and coöperation to each other and to our organizations are indispensable. What a fine thing it would be if every Dentist in the country was a member of the State and Local Organizations with Loyalty and Coöperation for their watchword.

I am not offering any criticism but I would like to plead for more harmony, friendship, loyalty and coöperation, every day in the week and every week in the year. It is not enough to just be close to each other annually or semi-annually. Some of us feel that we should stand four square with our National, State, District and Local organizations and why not, but what is wrong with us as individuals? Can someone answer this question? Yes and No.

Well, let's all go to Elizabeth City, May 2, 3, 4, and bury our differences, renew our friendships and prepare to live closer to

A T T E N D T H E S T A T E M E E T I N G

each other in the future than we have in the past assisting our fellows thereby, as individuals through our organizations, to attain that something, WE WISH FOR MOST, called SUCCESS.

Fraternally,

H. V. MURRAY,
President Third District.

At the meeting of International Dental Congress in Paris last summer, which to digress for a moment, was the most colorful dental meeting ever held. There were in attendance between three thousand and thirty-five hundred delegates, representing forty-four countries. Eight hundred of these, or approximately one-fourth, were American dentists who had traveled over an average of four thousand miles to be present. What's the significance? Does this have any bearing on the fact that American dentistry is far in the lead of that of any other country? Dr. Campbell, English dentist in charge of Eastman Clinie in London, admitted to me that dentistry in the U. S. A. was 15 years ahead of that in England. I think this proves that the progressiveness of any dental organization is in direct proportion to the percentage attendance of its members on meetings.

On visiting a dental office in Berne, the Swiss capital, we asked the dentist did he attend International. He replied that he did not, stating that only one man was there from Berne. When informing him there were eight hundred American dentists present, he came back by saying that we dentists over here made plenty of money. All of us know the fallacy of this statement. Here was a large city within three hundred kilometers of the meeting and one man attended. So distance doesn't make a great deal of difference any way.

In spite of the fact that Elizabeth City is off center of the State, there are very few members in our society who couldn't arrange to attend. It seems to me it would be a very good thing for the State Society at its annual meeting, to award a cup to the district having the largest percentage attendance. However, members of the N. C. Dental Society already have an enviable record of attendance, which has been a contributing factor to the progress of dentistry in North Carolina. Nevertheless, let us not rest on our laurels but carry on to ELIZABETH CITY, MAY 2-4.

E. M. MEDLIN, D.D.S., *Editor.*

AT ELIZABETH CITY, MAY 2, 3, 4, 1932

Dr. Louis J. Pegram of Raleigh has recently located in Pinehurst, having bought the equipment of Dr. L. V. Henderson. Dr. Henderson has moved to Williamsburg, Va.

FOURTH DISTRICT

Man is a gregarious animal. We are so constituted that we accomplish our best only by mutual coöperation, in pleasant rivalry and social contacts. This is true in business, politics, the moral realm, and religion. It is no less true in our professions. It is impossible to live the *good* life to or for ourselves alone. It must be with and for others.

Our social order is built up by the exchange of goods, ideas, and services. What is anything worth that we cannot share? Would the greatest orator find inspiration in speaking to a forest of trees, or to empty pews? How much of the beautiful music of the artist would be lost with no one to listen but himself? The great pains-taking surgeon who serves best is he who has served most.

This general thinking leads us to specific conclusions: The Program Committee and Officers of our Society are preparing for us a helpful and interesting meeting at Elizabeth City, in May. It is not merely our privilege, but our duty, to attend this meeting; to share ourselves, our ideas and suggestions; to teach and be taught; to build stronger fellowship and to fit ourselves for better service.

It has been said by one of the State's foremost citizens that "In good times we make money, in hard times we make men." In these days when we have little else to do, does it not behoove us to be building ourselves into better men, truer friends, and more proficient dentists? Let us utilize some of these hours of enforced idleness to take stock of what we have been doing hitherto: how we have been living, spending, investing; what has brought us net income and what has proved profitable outgo; whether our activities and the things we have acquired have helped or hindered us in successful living. Such an inventory may be so worth while for our future plans and labors and expenditures, that we shall soon forget those vacant pages in our appointment books, and pockets shall be happy again with something to jingle besides a

bunch of keys. Perhaps this serious pondering of the past is one way to conquer the depression and begin to climb to heights beyond.

VanDyke has a message for us in this hour:

The bars of life at which we fret,
That seem to prison and control,
Are but the doors of daring, set
Ajar before the soul.

R. M. SQUIRES, D.D.S., *Editor.*

Pack away your troubles,
And store them for a while;
Cast away your grouchy look,
And wear a big broad smile.
We're looking for you fellows,
To be there on the dot
Regardless of the weather,
If you're a sport . . . you'll be there, cold or hot.

FIFTH DISTRICT

Dr. John R. Allison, who has practiced Dentistry in Wilmington for the past six years, has given up his practice and left the city.

Dr. Guy Pigford, until recently with the State Board of Health doing school dentistry, has opened an office in Wilmington.

Dr. B. McK. Johnson of Greenville, N. C., has recently moved to Wilmington to continue the practice of dentistry.

Dr. Carl S. Sloan, aged 54, died at his home in Wallace, N. C., with the rare disease anginilis oblibetraus, commonly called Buer-gus Disease. Since obtaining his license in dentistry, he has practiced in Wallace, and because of his strong convictions and high ideals he was respected by all those who came in contact with him. His death is a great loss to the community in which he lived.

H. K. THOMPSON, D.D.S.,
Editor.

The annual conventions of our State Dental Society are occasions to which every member looks forward with keen interest and anticipation. Judging from the manifestation of interest that has been in evidence thus far, the meeting to be held at Elizabeth City on May 2, 3 and 4 is going to be a great success.

The Program Committee, after much discussion and considerable study, has arranged a program in keeping with the progress of the times. There will be a greater number of our own clinicians on the program this year than ever before and, at the same time, our major clinicians are men who are considered outstanding in their particular field of work.

While the professional part of our program is all that could be desired, the features of entertainment, such as dances, a trip on the Coast Guard cutter, Pamlico, golfing and a motor trip to Roanoke Island, the birthplace of Virginia Dare, are well worth the trip to Elizabeth City, to say nothing of the knowledge and information to be gained from the scientific features of the program. The average member of our profession feels that he hasn't the time for recreation. He gets down to his office early in the morning and, as a general rule, he stays there all day long, with the exception of a brief interval for lunch. That same procedure goes on, day after day. There is no denying the fact that we sometimes grow tired and weary and really long for a change of scenery different from that which is contained within the four walls of our offices. It is when you begin to feel like this that thoughts of our annual State Convention begin to make themselves evident. Letters begin arriving, informing us of the details of the program. We begin to think of the good time we had at Winston-Salem last year, or at Asheville the previous year, or at some previous meeting place of the association. We obtain mental pictures of Dennis Keel, discussing the Einstein theory of relativity; J. N. Johnson speaking in favor of prohibition; Clyde Minges telling the necessary steps in connection with becoming a master-farmer; Paul Jones making change from that little pocketbook which he always carries around with him; E. A. Branch reciting a Mother Goose story—and that isn't the only kind he recites—Martin Fleming, John Wheeler and Fred Hunt singing "How Dry I Am" when they're really not dry at all, and many other fellows whom it is a pleasure to be associated with and who help so materially in making our State meetings a success.

We think of the jolly gatherings in the hotel lobby or in the various rooms and we recall the displays of the various supply houses and laboratories; the lectures and talks made by visiting members of our profession; the helpful hints that are thrown out here, there and yonder during the course of the convention. We smack our lips as we recollect the good things that were served us at the banquet (perhaps, also, a few may smack their lips as they recall the good things that were served before the banquet) and by that time we're beginning to count the days until we can leave the old office, jump into the car and begin the trip to the next convention.

It won't be long now. On May 1 the fellows will begin assembling at Elizabeth City for three days of business, fellowship and fun. Those folks in the great Albemarle section of our State know the meaning of the word, Hospitality. The Woman's Club of Elizabeth City, the Chamber of Commerce and the various other civic organizations are coöperating to make the meeting a big success. Perhaps we may even have the privilege and pleasure of gazing upon W. O. Saunders with his pajamas—or without his pajamas. Anyway, we'll be glad to see him regardless of what his wearing apparel may be, if any.

It does us all good to shed the cares and responsibilities of our office duties for a few days. Upon our return we are better able to cope with the problems that present themselves: we will assume our duties with a renewed spirit and enthusiasm and we will be well repaid, directly and indirectly, for the time we spent in attending the convention.

However, no convention can be a success unless everybody is there. There's no pleasure in singing "Hail, Hail, the Gang's All Here," if the gang doesn't show up. No matter who the member may be, if he doesn't show up at Elizabeth City during the time of the convention, he will be missed. He'll be missed almost as much as that famous corner around which Prosperity is still hiding.

Z. L. EDWARDS, D.D.S., *President.*

DR. C. S. SLOAN, Wallace, N. C.

Born in Duplin County, September, 1879

Died March 1, 1932

Graduated at University of North Carolina in 1902

Graduated Baltimore College of Dental Surgery in 1905

Practiced in Wallace from 1905 until 1932

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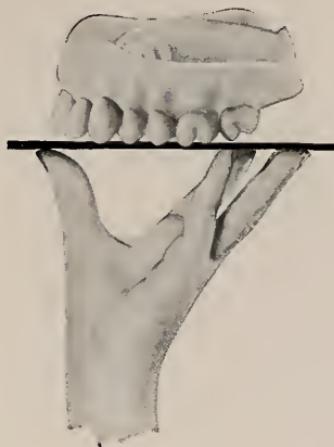
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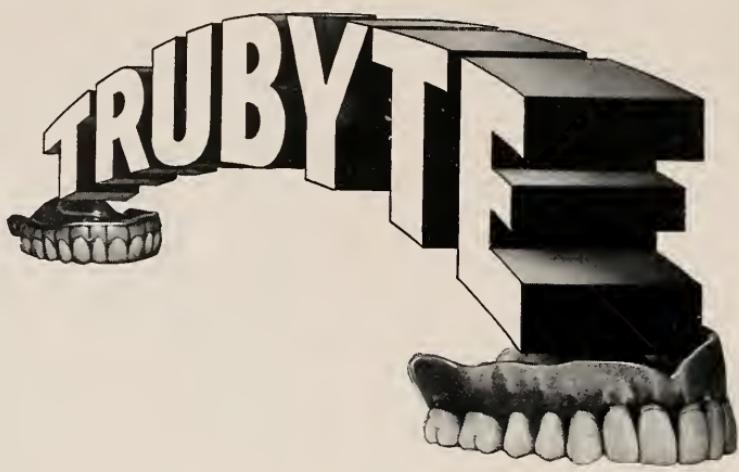
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